

1520 No. 5143

IN THE

1514

United States Circuit Court of Appeals

For the Ninth Circuit)

MOULTON MINING COMPANY (a corporation),
CLARK-MONTANA REALTY COMPANY (a corporation), ELM ORLU MINING COMPANY (a corporation), and J. ROSS CLARK,

Appellants,

vs.

ANACONDA COPPER MINING COMPANY (a corporation),

Appellee.

BRIEF FOR APPELLANTS.

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Appellants,

vs.

ANACONDA COPPER MINING COMPANY (a corporation),

Appellee.

BRIEF FOR APPELLANTS.

STATEMENT OF THE CASE.

This is a suit to quiet title to the patented Poser lode mining claim situated at Butte, Montana, and is based upon the Federal practice and the Montana statute governing such suits. (9479 Montana Revised Codes of 1921.) This statute provides that:

“An action may be brought and prosecuted to final decree * * * against any person * * * who may claim any right, title, estate or interest therein * * * adverse to plaintiff’s ownership * * * whether such claim or possible claim be present or contingent * * * for the purpose of determining such claim or possible

claim, and quieting the title to said real estate
* * * *,

Plaintiffs (appellants) in their bill of complaint allege their ownership and possession of the Poser lode claim and its priority of location over the many mining claims of the defendant (appellee) to the south; that the discovery vein for such lode claim is the Rainbow vein traversing the entire length of the Poser claim and crossing its easterly and westerly end lines (See Diagram No. 1, Appendix*); that in such Poser claim there are additionally found two other veins—the Poser and Intermediate—the apices of which each traverse the lode claim from end line to end line and which secondary veins each dip southerly into and penetrate underneath defendant's adjoining claims, and that the defendant is mining and extracting ores from such Poser and Intermediate veins. Plaintiffs ask that their title to the Poser lode claim and to the Intermediate and Poser veins be quieted, and for an accounting for the value of ores already extracted by defendant, and for injunctive relief.

The defendant answered in effect with a disclaimer to the Poser lode claim, with a denial of the existence of any Intermediate or Poser veins, with a denial of priority of location of the Poser claim over its mining claims, with an admission of the existence of the Rainbow vein apexing in the Poser claim as alleged

*In order to aid the court and lighten its burden as far as possible we have prepared an "Appendix to Appellants' Brief, containing Diagrams" which illustrate the text of the main brief. Since many of these diagrams are referred to in various places in the main brief it is more convenient for easy reference to have them bound under separate cover.

in the bill of complaint, and then set up various statutes of limitations and adverse possession.

At the trial the parties admitted in each other the ownership and possession of their respective mining claims and it was also admitted that plaintiffs' Poser claim was prior in time of discovery and location to the many mining claims of the defendant to the south. (Tr. pp. 101-107.) The court then proceeded to try the remaining principal issues, whether the two other veins—the Poser and Intermediate—of the Poser claim existed as by the plaintiffs alleged and whose very existence the defendant had by its answer denied. All of the evidence of the case is directed to the determination of such questions. During the course of the trial the defendant's witnesses admitted the existence of the Intermediate vein branching from the Rainbow in Poser subsurface ground. At the conclusion of the trial and in its printed brief filed with the trial court, the defendant additionally admitted that that part of a vein which had been described as the "Intermediate" vein in the bill of complaint but which was designated as the "View" vein by the defendant, was the property of plaintiffs west of a plane parallel to the end line planes of the Poser claim extended southerly and drawn through a point on the Poser south side line 370 feet distant from the southeast corner. The language of the admission is:

"In so far as the plaintiffs have the apex of the View vein at any place westerly from the point where the Emily crosses the south side line

of the Poser claim, **they are entitled to all ore and minerals in the View vein between the plane of their west end line and a parallel plane drawn down through the point where the Emily crosses the south side line of the Poser.*" (p. 266, Defendant's Brief filed with the trial court.)

In respect to the Poser vein contention, the court actually found that a vein did enter the Poser claim surface near its southeast corner and course northwesterly several hundred feet and until it encountered another vein, the Emily, the latter striking diagonally across the Poser claim surface. Such easterly segment of vein so found to exist by the court, the plaintiffs had contended was the easterly portion of their Poser vein, while defendant had contended it to be the "Pilot" vein. Yet, notwithstanding the defendant's disclaimer to the Poser lode claim entity as such, and the defendant's admission in respect to ownership by plaintiffs of a part of the Intermediate vein, and notwithstanding the trial court's finding in respect to a portion of a vein that it knew plaintiffs were claiming and calling a part of its Poser vein, the local court, acting as if the nature of the case were trespass for the recovery of damages pure and simple, seemingly and utterly oblivious to the rights conceded plaintiffs and which they were entitled to have quieted in themselves by the very force of the Montana statute controlling the disposition of actions of this nature, caused the entry of a decree that plaintiffs take nothing, dismissing the bill of complaint, and awarding costs to defendant. (Tr. p. 2255.)

*Italics in this brief are ours.

The federal practice in such suits, as well as the Montana statute, require that inasmuch as the court had jurisdiction of the subject matter, it should have made "a complete adjudication of the title to the lands" in controversy (§9487 Montana Revised Codes of 1921), in so far as that was possible, and it should, at the very least, have decreed plaintiffs whatever was conceded by defendant to be plaintiffs. The decision and decree should, in any event, be modified to the end that plaintiffs have what is theirs by their adversary's express disclaimer and consent and which, even in the absence of any disclaimer, would inevitably belong to plaintiffs as a necessary result of the court's findings as to the facts in the above-mentioned particular.

VEINS AND GEOLOGICAL FEATURES INVOLVED.

The surface map inserted in the "Appendix" as Diagram No. 1 illustrates the claim and vein relationships. Priority of the Poser location is admitted. The veins and geological features which it is essential to consider are:

1. **Rainbow Vein**
2. **Intermediate Vein ("View" Vein)**
3. **Poser Vein**
4. **Emily Vein**
5. **State, Badger, North State and North Badger Veins**
6. **Black Rock Fault**

In addition to the foregoing there are the Jessie, Edith May and other veins which, though found in

this territory, are only incidentally involved. A brief preliminary description of the major features will help to clarify the situation.

1. Rainbow Vein.

The Rainbow vein is admitted to apex in the Poser claim and to extend from end line to end line and is further admitted to be its discovery vein. The dip of this vein is nearly vertical and consequently none of its ore bodies are involved here. Its relevancy is due to the fact that it is the discovery vein and that its apex crosses both end lines of the Poser claim and also because the Intermediate vein admittedly branches from it.

2. Intermediate Vein.

The Intermediate vein dipping southerly admittedly branches from the south side of the Rainbow vein (court's decision, tr. p. 2234), so that for some part, at least, the Rainbow vein apex would necessarily be the apex of the Intermediate branch. While appellee, in its answer, denied the existence of the Intermediate vein *in toto*, yet, at the trial, its witnesses agreed substantially with appellants' witnesses as to the existence and position of this vein throughout the workings where it had been disclosed within the vertical limits of the Poser claim. To overcome the fact that a vein segment of identical dip and substantially similar strike continued on down from these Poser claim workings, where the Intermediate vein admittedly existed, to and embracing the ore in dispute, appellee advanced the theory that the vein

segment below was a different vein from the Intermediate vein above and it called this lower vein segment the "View" vein. The trial court sustained such contention. Appellee's witnesses also advanced the astonishing theory that this "View" vein extending up into Poser subsurface workings was found exposed in practically all of these workings wherever the admitted Intermediate vein was found and was coincident with it throughout. Though the "View" vein came up into Poser subsurface with a steep southerly dip in such a position that it had every appearance of apexing therein, appellee advanced the theory, which was adopted by the trial court, that the "View" vein was a branch of the northwest striking Emily vein having a steep northeasterly dip, and since the Emily was found to apex in appellee's claim to the south of the Poser claim for the easterly 370 feet of the length of the latter claim, and the ore bodies in dispute were within this portion of the "View" vein below, no apex right in appellants to these ore bodies existed. However, the "Pilot" vein segment, admitted to apex in the easterly portion of the Poser claim so as to cover this easterly 370 feet and the ore bodies in dispute below, was also claimed by appellee to be a northerly branch of the Emily vein. It would, therefore, because of priority of the Poser claim, necessarily give to appellants extralateral rights on this easterly segment of the "View" vein which was held by the court to be a downward and southerly branch departing from the opposite side of the Emily vein. The trial court ignored this fact. The "View-Emily" vein as it extended upward into Poser claim

subsurface territory above the junction with the Emily was also admittedly cut off and thrown some 200 feet by the Black Rock fault so as to create a sub-fault apex for the Emily vein beneath Poser surface. The Emily apex of the joined "View-Emily" veins also admittedly extends westerly in Poser territory beyond the 370 foot point where the trial court found the Emily apex entered the Poser claim and yet the trial court did not award appellants any segment of the "View" vein whatever. On the court's own interpretation of the facts and according to appellee's express admission contained in its printed brief filed with the trial court, appellants are entitled to all ore and minerals in the "View" vein extralaterally and west of the 370 foot point where the Emily apex admittedly enters the Poser claim.

Diagram No. 1 (Appendix) shows the Emily vein apex extending westerly in Poser ground from the 370 foot point on the Poser south side line to its point of departure through the Poser north side line 50 feet east of its west end line. The court found these to be the facts and also found in accordance with appellee's contention that the "View" vein in depth joined the Emily, thus making the Emily apex the apex of both veins. There can be no escape from the conclusion that the court should, at the very least, have awarded appellants what appellee conceded belonged to them.

3. Poser Vein.

The Poser vein was one of the main subjects of controversy in the court below. Appellants assert that

it apexes in the Poser claim for the full length of the claim as represented on Diagram No. 1 (Appendix), dips extralaterally and southerly, and embraces valuable and extensive ore bodies mined by appellee between the 1300 and 3000 level workings of appellee's Badger mine. Appellee denied by its answer the existence of any Poser vein but at the trial contended (a) that an admitted vein segment found in the Poser claim east of the Emily vein at the surface and down to a depth of 1000 feet was not the Poser vein but the "Pilot" vein, being but a northwesterly extension of the well-known "Pilot" vein situated in other claims of appellee to the southeast, (b) that the middle segment of appellants' Poser vein extending in the Poser claim immediately west of the Emily vein for some 200 feet was not a true vein at all but only a fractured zone associated with the Emily vein, and (c) that the westerly segment of appellants' Poser vein was only Black Rock fault containing drag material from other veins intersected by the fault. The court upheld appellee's contentions.

On the other hand, careful and complete assays taken by appellants in all underground workings at regular intervals throughout the area occupied by their asserted Poser vein, extending from end line to end line of the Poser claim and from the surface down to and including the 1300 level, furnish irrefutable proof of the existence of practically continuous mineralization throughout, sufficient in amount and character to justify its being held a vein, as a matter of law. The outstanding features are (a) the

fact that otherwise it is impossible to account for the remarkable persistence and occurrence of this mineralization existing within the comparatively narrow limits of the area occupied by this great mineralized sheet constituting the Poser vein, (b) the fact that, as is best illustrated on the skeleton models, the position occupied by the Poser vein is the natural and logical upward extension of the mineralization from the ore bodies below, and (c) the existence of the Poser vein acting as a footwall of the ore bodies below affords the only logical explanation of the fact that these ore bodies do not extend through the plane of the Poser vein to the north but are controlled and terminated by and merged into the Poser vein itself wherever they approach and encounter it. Only rarely do any of these hanging wall ore bodies penetrate and appear beneath the Poser vein to the north and these rare occurrences are northwest veins of earlier age.

4. Emily Vein.

The Emily vein is a northwest striking, steep, north-easterly dipping vein, the apex of which the court found "enters the (Poser) claim 370 feet west of the southeast corner and departs 50 feet east of the northwest corner." (Tr. p. 2234.) See the surface map Diagram No. 1 (Appendix) for its approximate position as found by the trial court. None of the ore bodies of the Emily vein is involved in this litigation but it becomes essential to consider this vein because, as already pointed out, the court found that the "View" vein, coming up into the Poser claim from

the ore body in dispute, joined and became a branch of the Emily vein. Therefore, the court held that the Emily vein apex controlled the ownership of the ore body in dispute existing in the "View" vein, entirely overlooking and ignoring the fact that the "Pilot" vein, also claimed by appellee to be a branch of the Emily, admittedly apedexed in the eastern portion of the prior Poser claim, for a length sufficient to cover the disputed ore bodies existing in the "View" branch of the Emily in depth and that the Emily vein is faulted some 200 feet in Poser ground, thus creating a sub-fault apex for the Emily and its branch, the "View" vein.

5. State, Badger, North State and North Badger.

These are more or less parallel veins and their branches situated south of the Poser vein, dipping more steeply than the Poser, and merging with and joining the Poser in many places. The Poser vein occupies the position of a footwall vein, with these other veins branching upwards from the Poser vein. The trial court found that these veins apedexed in appellee's claims to the south of the Poser claim in the face of the fact that hundreds of feet of unexplored territory and lack of continuity and identity existed between the tops of the stoped ore bodies and the surface. A glance at the skeleton models will confirm this statement.

6. Black Rock Fault.

There is a major fault extending through Poser subsurface territory, occupying a position substan-

tially parallel with the length of the Poser claim and called the Black Rock fault. (This fault is designated on many of appellee's maps as the "Poser-Black Rock Fault.") This fault is found to the north of the Poser south side line and dips steeply to the south across the side line not far from the 1300 Poser level and is found in many of the workings of appellee's mine in the vicinity of the disputed ore bodies of the Poser vein. The throw on this fault was admitted to be anywhere from 160 to 200 feet. (Section B-B, Defendant's Exhibit 121 indicates a throw of 200 feet. Other sections, Exhibits Nos. 119 and 120, also introduced by appellee, would indicate an even greater throw. Copies of portions of these sections are inserted in the Appendix as Diagrams Nos. 6, 7, and 8.) This fault for considerable distances coincides with and strike-faults the Poser vein. It is post mineral, occurring later than the formation of the Poser vein and naturally followed the plane of Poser vein with which it corresponded substantially in strike and dip throughout much of this area, just as it followed and strike-faulted the Rainbow vein further to the east. (See the "Elm Orlu" case, *Clark-Montana Co. v. Butte & Superior Co.*, 233 Fed. 547, 560.) The trial court found this fault to be "in the nature of a footwall" of the disputed ore bodies. (Tr. p. 2242, also again on p. 2243.) How a post mineral fault can act as a footwall for great ore bodies extending through the country for thousands of feet, it is difficult to explain. No considerable ore bodies extend through or are found to the north of and beneath the general plane occupied by the fault. How

can a post mineral fault affect and delimit ore bodies already formed? Appellants' theory that the Poser vein acted as a delimiting footwall plane to these ore bodies and that it reopened and enriched them (exactly as appellee's chief geologist stated that veins of the Steward age reopened and enriched veins of earlier age) affords the only logical explanation for this striking and self-evident situation which so clearly appears on both large skeleton models and particularly on appellants', where the Poser vein is colored red.

The Black Rock fault is also an important feature in relation to the Intermediate-“View” vein situation because, as appellee's own cross-sections indicate, the “View” vein is necessarily cut off and faulted and thrown for some 200 feet in Poser subsurface territory, thus creating for that vein a subfault apex which extends longitudinally through the Poser claim and exists vertically beneath Poser surface.

Corra Fault.

The Corra fault of comparatively small throw, 30 feet or so, and of northeasterly strike and of steep northwesterly dip, cuts across the Intermediate or “View” vein and dislocates it for such distance. This accounts for the slight jog in the otherwise uniform strike and dip of this Intermediate-“View” vein which appears on both skeleton models in the vicinity of the Poser or Elm Orlu 2500 level, but which admittedly does not destroy vein identity.

It is important to bear in mind the fact that the witnesses oftentimes refer to “Poser” and “Elm Orlu” levels and workings interchangeably since they

constitute a connected unit having been run by appellants in these contiguous claims from appellants' Elm Orlu shaft. Likewise the major portion of the workings to the south of the Poser claims in depth were run and the extensive stoping was done by appellee in the general area known as its "Badger mine" and these various levels are referred to as "Badger levels."

THE EXHIBITS.

The main exhibits consist of two large skeleton models, each side having introduced its own, representing the mine workings found in the general area involved and each side has painted its respective interpretation of the geological conditions on its respective model. Plaintiffs' model, Exhibit No. 31, has the conventional red color for the Poser vein and the ore bodies mined by appellee, which are claimed to be a part of the Poser vein. The Rainbow vein and its branch the Intermediate vein, including the ore body in dispute mined by appellee between the 2600 and 3000 Badger levels, are colored pink. All other veins are colored yellow. Faults are colored blue. Defendant's model, Exhibit No. 125, has veins of East-West age, including the Rainbow, Badger and State veins, colored red, and the northwester, including the Emily, Jessie and Edith May, also the "View" (Intermediate) vein, which it also claims to be a northwester, colored blue, while the Black Rock fault is colored green.

Each side introduced a set of large level maps, Plaintiffs' Exhibits Nos. 5 to 30 inclusive, Defendant's Exhibits Nos. 92 to 117 inclusive, and defendant introduced large cross-section maps, Exhibits Nos. 119 to 124 inclusive. Plaintiffs also introduced a set of level and cross-section maps showing graphically the results of continuous sampling on the Poser vein, Plaintiffs' Exhibits Nos. 60 to 80 inclusive. There were numerous other exhibits some of which will be referred to and described in the course of the argument.

VEIN SYSTEMS OF BUTTE DISTRICT.

The witnesses on both sides in this case were in general agreement with the literature of the district as to the existence of two vein systems in the Butte district and within the area in controversy. The older veins of the district generally referred to as the "East-West" veins are represented in this area by the great Rainbow vein or lode of which the Intermediate vein is admitted to be a branch. The Badger and State veins in some of the workings of the Badger mine are also recognized as belonging to this system. Next in age is the northwest or "Blue vein" system, commonly referred to because of the general strike of such veins as "northwesters." The Emily, Jessie and Edith May veins are recognized as belonging to this system. Appellee contends, and the trial court so found, that the "View" vein is of northwest age. A still later system of veins, referred to as the "Steward" system, is also recognized by the literature of the district. The chief geologist of appellee,

in a monograph published long before this litigation was thought of, described the "Poser" as a vein of Steward age, referring to an exposure in the Badger mine workings of what appellants now claim to be the Poser vein, though all of appellee's witnesses, including this geologist, now emphatically deny that there is any Poser vein of Steward age. The Steward veins were then described by appellee's chief geologist as having reopened the older East-West veins and having enriched and added materially to their valuable mineral content.

While these three vein systems are recognized as having been formed in part, at least, at successive periods of time, nevertheless it is also generally recognized that the mineralization of these three systems was practically continuous throughout the entire vein-forming period and that there was necessarily an overlapping of vein mineralization of the different systems. In other words, there was no cessation of the mineralizing agencies sharply separating the formation of the veins of the different systems.

SPECIFICATION OF ERRORS.

The detailed "assignment of errors" will be found in the transcript (Tr. pp. 2258-2263 inclusive). It would serve no useful purpose to restate here these assignments *verbatim* since many of them are necessarily cumulative and many of them refer only to details of the main issues. It will materially simplify matters and conserve the time of this court to

consolidate and restate in substance and concisely those errors which will be urged upon this appeal.

SPECIFICATION OF ERRORS AS TO INTERMEDIATE VEIN.

1. The ownership of the eastern segment of the "View" vein, including the ore body in dispute embraced in that vein, was controlled by the trial court's finding that the "View" vein was a branch of the Emily vein. The Emily vein apex was found not to enter the Poser claim until it reached a point on the south side line of that claim 370 feet west of its southeast corner. Therefore, this segment of Emily apex covering the ore body in dispute being in appellee's ground, the ore body in question was awarded to appellee. The trial court ignored the admission found in appellee's printed brief filed below, which has already been quoted hereinabove.

Disregarding the logic of the situation created by its own findings, the court failed to award to appellants the ownership of the extralateral segment of the "View" vein and the ore and minerals found in it to the west of the 370 foot point, where the Emily apex crosses the south Poser side line, and measured between the conceded limiting extralateral planes. Error is claimed in this respect. (Assignment XXVII.)

2. The trial court found that the "View" vein united with the Emily vein. According to appellee's theory the "Pilot" vein found in the eastern portion of the Poser claim is also a branch of the Emily vein and, since the "Pilot" vein admittedly apexes in Poser ground, it will necessarily control the ownership of

the ore body found in the "View" vein, which is also a branch of the Emily, and the court erred in not so finding and awarding. (Assignments XXV, XXVI, and XXVII.)

3. The vein segment called the "View" vein by appellee admittedly comes up from depth from the ore body in dispute, with identity and continuity unbroken, and crossing the Poser south side vertical bounding plane admittedly enters the subsurface of, and is found vertically beneath, that claim. As appellant's large cross-section maps indicate, the Emily vein, which the "View" vein has joined lower down, has been cut off and faulted and thrown a distance of 200 feet by the Black Rock fault, thus creating a sub-fault apex for this vein segment. This sub-fault apex is found extending longitudinally within the vertical boundaries of the Poser claim from the east end line plane of the Poser claim for several hundred feet west. The trial court erred in not finding this sub-fault apex to be the controlling apex of the ore body and vein segment in dispute. (Assignments XXV-XXVII inclusive.)

4. The court erred in holding that appellants were asserting a right to follow the ore body in question on strike rather than on dip and in giving this as one of the reasons why appellants would not be entitled from a legal standpoint to this ore body. (Assignment XIX.)

5. The court erred in deciding that the "View" and Intermediate veins were separate veins. By reason of the admitted fact that the "View" and Intermediate veins are found throughout hundreds of feet

of workings within the Poser claim in contact, both on strike and dip, so that none of appellee's witnesses could identify and distinguish the one from the other, they constitute as a matter of law a single joined vein and the apex of the Intermediate branch of the Rainbow vein will necessarily control the ownership of the ore bodies found below in the "View" vein segment because, as a matter of law, since the two veins where they exist side by side are indistinguishable, the "View" vein and the Intermediate vein become one merged vein for all legal purposes. (Assignments XX-XXVII inclusive.)

SPECIFICATION OF ERRORS AS TO POSER VEIN.

The trial court decided in substance that the Poser vein had no existence as a distinct vein entity as claimed by appellants. The court found that the portion of the Poser vein lying to the east of the Emily was in fact the "Pilot" vein, upholding appellee's contention, and held that none of the ore bodies in controversy is controlled by this vein segment.

The court found that the portion of the Poser vein extending westerly from the Emily vein for some 200 to 400 feet was nothing but "the conjugated fracturing and stock work of the Elm Orlu case" and was not a vein in a legal sense.

The balance of the Poser vein extending for 400 to 600 feet to the west end line of the Poser claim, the court found to be "naught but the Black Rock fault".

The court brushed aside the great mass of assays taken throughout the Poser vein for the length of the Poser claim and extending downward from the sur-

face for some 1300 feet in depth, to the area where both sides concede that a vein exists. The court considered it unnecessary to determine whether the mineral showing evidenced by these assays constituted a vein "in legal contemplation or in fact".

Appellants' assignment of errors in regard to the court's findings with respect to the Poser vein may be generalized as follows, viz.:

1. A mineral deposit possessing the values throughout its length and depth, as evidenced by appellants' assays of the Poser vein and the other accompanying evidence, constitutes in legal contemplation and as a matter of law a vein, and the court's finding to the contrary is clearly erroneous. A proper determination of this question involves the legal definition of a vein and the application as a principle of law of such definition to the mineral deposit in question, viz.: the Poser vein. (Assignments I-XVIII inclusive.)

2. Error was assigned to the exclusion of evidence, consisting of assay graphs, giving the results of sampling of the Poser vein and fault gouge found in certain raises and in the 1346 drift. This evidence was offered by appellants in rebuttal for the purpose of distinguishing Black Rock gouge from Poser vein material and to demonstrate that the mineralization of the Black Rock fault gouge could not, in any reasonable measure, account for the mineralization of the Poser vein. (Assignments XXIX-XXX inclusive.)

THE QUESTIONS PRESENTED FOR DETERMINATION
ON THIS APPEAL ARE QUESTIONS OF LAW.

We are not unmindful of the rule so frequently announced by this and other appellate courts that a finding of fact made by the trial court, where based on material evidence, will not be disturbed on appeal "unless clearly and manifestly wrong". (*Butte & Superior Co. v. Clark Montana Co.*, 249 U. S. 12, 30.) We also recognize that much of the trial court's opinion is devoted to a determination of questions of fact. While this is true, it is also true that most of these questions of fact are inextricably interwoven with questions of law. That an appellate court will inquire into questions of this character cannot be doubted. The rule that this court will be bound by findings of fact made by the court below is subject to many important qualifications, as, for instance, (1) where the finding is without support in the evidence (*Interstate Amusement Co. v. Albert*, 239 U. S. 560); (2) where a purported finding of fact is so involved with questions of law that the finding is in fact a decision on a question of law (*Kansas City So. R. Co. v. C. H. Alvers Commission Co.*, 223 U. S. 573; *Norfolk etc. R. Co. v. Conley*, 236 U. S. 605); (3) where the evidence would sustain other findings, overcoming the finding made. (*Carlson v. Washington*, 234 U. S. 103.)

One of the leading cases in mining law, presenting a situation somewhat analogous to the one here presented, is *Stewart Mining Co. v. Ontario Mining Co.*, 237 U. S. 350, where the Supreme Court of the United States used the following language:

"On first impression it would seem that the state courts rested their judgments solely on a question of fact; in other words, decided that no part of the apex of the vein lay within the lines of the plaintiff's claim. Or, to state the finding differently, that what plaintiff asserts to be the apex is the side edge of the vein on the line of its dip, the vein crossing the south side line of the Senator Stewart Fraction at about right angles. This finding is undoubtedly one of fact and defendants, asserting it to be such, make a motion to dismiss the writ of error for want of jurisdiction in this court on the ground that such fact was sufficient to uphold the judgment, and contend that it is hence immaterial that the court discussed and decided other questions Federal in their nature. For this cases were cited, among others, *Mammoth Mining Co. v. Grand Central Mining Co.*, 213 U. S. 72.

"But this is an imperfect view of the decision of the Supreme Court. The court observed that the decisive assignment of error was lodged against the finding that the vein had not its apex in the Senator Stewart Fraction claim, and, after referring to the testimony of witnesses as to the inclination and apparent strike of the vein at certain points, said: 'But, taken as a whole, the evidence supports the findings, and the controversy arising on this appeal becomes a question as to the correct interpretation and application of the rule of law that should apply to the facts of the case. The whole question rests on the correct application of the apex and extralateral rights provisions of Sec. 2322, U. S. Revised Statutes'. The court further observed that it would attempt no new application of the statute but would seek and apply the construction which this court had made; and, after consideration of the decisions and an analysis of Sec. 2322, and especially of the words 'downward course', said: 'To pursue a vein in the direction of its strike at an

angle of less than 45 degrees to the course thereof would clearly not be following the vein on its "downward course" as authorized by the statute'.

"It is manifest, therefore, that the court did more than decide the question of fact, and made its judgment to depend as well upon a question of law. The Motion to dismiss, therefore, is denied." (pp. 356-357.)

So also in this case, while the court below decided certain questions of fact which were basic, it also made its judgment to depend as well upon questions of law.

While the trial court held that the Poser vein had no existence, as a fact, nevertheless in its own opinion it stated that it was unnecessary to consider whether veins of different ages could join or only intersect and also whether appellants' assays of the Poser vein would make it "a 'continuous vein' *in legal contemplation* or in fact". (Tr. p. 2246.) This expression just quoted indicates that the trial court was definitely of the opinion that appellants' assays of the Poser vein presented a legal question as to whether or not we are dealing with a vein within the contemplation of the mining statute. The other questions that will be discussed in this brief in relation to the Poser vein, though involving questions of fact, have a direct bearing upon the legal aspect of this main question of vein definition.

When we come to deal with the Intermediate- "View" vein situation, we will find that all the questions, discussed under the various sub-headings, in-

volve distinct questions of law that are so interwoven with the questions of fact that they must necessarily be considered in conjunction.

(A) INTERMEDIATE ("VIEW") VEIN.

Appellants alleged in their bill of complaint that there is the apex of a vein in the Poser claim traversing it from end line to end line, which vein dips extralaterally and southerly and embraces the ore bodies mined by defendant in the vicinity of its 2600 and 2800 levels. (Paragraphs XIII-XV and XVII, Bill of Complaint, Tr. pp. 9-11.) They designated this as the "Intermediate" vein. Defendant denied in its answer the existence of any Intermediate vein or that any portion of the apex of any such vein existed within the surface boundaries of the Poser claim. (Tr. pp. 58-60, 71-72.) At the trial appellee's witnesses admitted the existence of that segment of vein which branches from the Rainbow beneath the surface of the Poser claim, and which was a part of what plaintiffs called their Intermediate vein, but these witnesses denied that this vein extended down on its dip southerly further than the Poser 1700 level, and at no place did they admit its existence outside of the Poser claim vertical bounding planes. However, they did admit that another vein which they called the "View" vein existed side by side with the Intermediate vein throughout all of the hundreds of feet of Poser workings, practically wherever the Intermediate vein was disclosed. (We will later on point out

to the court that while they asserted that these two veins existed side by side in all of these upper workings, they could not distinguish one vein from the other nor could they point to any mineralization of the contiguous veins that belonged to one vein rather than the other. We will hereinafter urge that for legal purposes this makes a single merged vein out of this extraordinary occurrence.) The "View" vein they contended continued on down and embraced the ore bodies in question. Since the "View" vein, throughout, occupies the area and has the geographical position in the ground which appellants assert is occupied by the Intermediate vein, it is difficult to see why the trial court did not award at least as much of this vein extralaterally to appellants as the proof and the admission of defendant's counsel and the findings of the court indubitably warrants. Certainly the mere fact that the court decided that plaintiffs were not entitled to that segment of vein which included the ore body in question nor the fact that defendant's witnesses at the trial were pleased to designate this vein by another name, would not justify the court in failing to award the remainder of this vein to plaintiffs, especially when defendant had conceded that plaintiffs were the lawful owners.

As the specification of errors assigned hereinbefore indicates, those relating to the Intermediate vein may be grouped under five headings and will be taken up and discussed in the same order, as follows:

1. The trial court erred in failing to award to appellants the "View" vein west of the 370 foot point.

2. The trial court erred in not awarding the disputed ore body to appellants because they own the apex of the "Pilot" vein.

3. The trial court erred in not holding that the Black Rock fault created a sub-fault apex for the "View" vein.

4. The trial court erred in intimating that the ore body in dispute could not be awarded to appellants because the angle of its strike with the Poser end line produced would be less than 45 degrees.

5. The trial court erred in not holding that where two veins exist side by side throughout hundreds of feet of exposures, and adversary witnesses are unable to differentiate and distinguish between them, for legal purposes they constitute one vein.

1. The Court Erred in Failing to Award to Appellants the Extralateral Sweep of the "View" Vein to the West of the 370 Foot Point Where the Emily Vein Apex Crosses.

Appellants' bill of complaint alleged that the Intermediate vein aped in the Poser claim, extending therein from end line to end line, and that this vein embraced within its extralateral sweep certain ore bodies in dispute. Appellants sought to have their title quieted to the entire extralateral sweep. By its answer, appellee denied the existence of any such vein but at the trial admitted the existence of the Intermediate vein and contended that the ore bodies in dispute were within another vein which it called the "View" vein. Its witnesses testified, as has already been pointed out, that this "View" vein extended up into Poser ground and that it was found to exist there

coincident with the Intermediate vein throughout all of the workings of the Poser claim, practically wherever the Intermediate vein was exposed. It is to this vein segment extending extralaterally, whatever its name may be, whether Intermediate or "View", and to the ore body described in the complaint, that appellants sought to have its title quieted.

Appellee in its printed brief filed before the trial court as has already been pointed out very candidly admitted that appellants were entitled to this vein segment west of the 370 foot point.

By reason of the fact that their principal expert witnesses testified that the "View" vein was found throughout the upper workings of the Poser claim, wherever the Intermediate vein was exposed, and by reason of the additional fact that the trial court found with their contention that the "View" joined the Emily as it extended upward, and by reason of the further fact that the court found that the Emily vein apex entered the Poser claim 370 feet west of the southeast corner and that this vein departed from the Poser claim 50 feet east of the northwest corner, the conclusion is unescapable, that appellants are, *at the very least*, entitled to a decree quieting their title to the Intermediate or "View" vein, or whatever it may be termed, between extralateral planes parallel to the Poser end lines and passed through the points of entry and departure of the Emily vein apex from the Poser claim.

As pointed out elsewhere in this brief, the trial court absolutely ignored appellants' right to have their title quieted to all segments of the veins in contro-

versy to which they might be lawfully entitled, and decided the case as if it were an action in trespass brought solely to recover damages for ore wrongfully extracted. It is difficult to see, in view of appellee's own admission as to appellants' extralateral rights to this "View" vein and the trial court's findings on this point, how the trial court could have failed to have entered a decree quieting appellants' title to at least as much of the "View" vein as appellee conceded they owned.

2. Accepting Appellee's Theory and the Finding of the Court With Regard to the "View" Vein and Its Union With the Emily, Appellee's Theory Also Involves the Union of the "Pilot" Vein With the Emily, and the "Pilot" Vein Segment Admittedly Apexes in Poser Ground.

Appellee's witnesses contended throughout the trial that the segment of appellants' Poser vein lying to the east of the Emily vein was the "Pilot" vein of their adjacent Pilot claim. According to their theory, both the "Pilot" and "View" veins are branches of the larger Emily vein, departing from it in the northerly and southerly sides respectively. It will necessarily follow from these premises that, inasmuch as the "Pilot" vein apexes in the Poser surface ground and by reason of the priority of the Poser claim, the "Pilot" branch of the Emily vein will control the ore bodies in dispute occurring in the "View" vein in depth, rather than the apex of the Emily vein situated in the mining claims of appellee, which are admittedly later in time of location. This relationship appears on three of the cross-section exhibits introduced by appellee at the trial (Defendant's Exhibits

Nos. 119, 120 and 121), reduced copies of which are inserted in the Appendix as Diagrams Nos. 2, 3 and 4. Diagram No. 2 is a section through the Poser east end line plane; Diagram No. 4 (B-B) is passed through a point nearly 300 feet west of the Poser east end line; and Diagram No. 3 (1600 W) is a section passed through a point intermediate to the other two planes. These three planes substantially illustrate conditions as viewed by appellee within the 370 foot distance measured from the Poser east end line and throughout which the trial court found the Emily vein to apex outside and south of the Poser claim. The position of these cross-sections with relation to the Poser claim and also the position of the "Pilot" apex in Poser ground as claimed by appellee are illustrated by Diagram No. 5 inserted in the Appendix and the following illustration here inserted in the text.

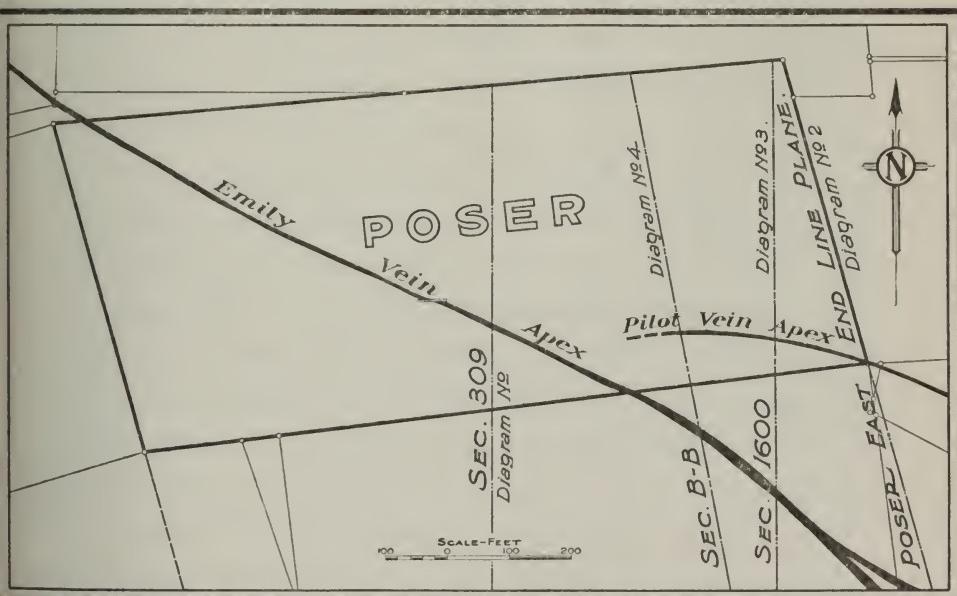


DIAGRAM No. 5-A

An examination of Diagram No. 2 (Appendix) being the section through the Poser east end line plane, will indicate the "View" vein coming up across the Poser south side line plane into the Poser claim and reaching close proximity to the Emily vein. The "View" vein is a branch of the Emily vein, according to appellee's theory and so found by the trial court. In order to reach the apex we must follow up along the Emily vein above the junction of the two, until we come to the Black Rock fault where the merged vein admittedly terminates against the fault. Crossing the fault to its hanging wall side to find the further upward continuation, the first vein we encounter across the fault directly in line with the Emily below the fault is the "Pilot" vein, which appellee insists is also a branch of the Emily. This "Pilot" vein is then followed up to its apex directly at the southeast corner of the Poser claim, where it enters that claim.

If we take Diagram No. 3 (Appendix), the 1600 W section (Defendant's Exhibit No. 120), we find the "View" vein coming up across the south side line plane of the Poser claim in the same relative position as on the more easterly section and approaching the two parallel branches of the Emily vein indicated on this section as intersecting the 1500 level. According to appellee's theory and the court's finding, a junction occurs here and we must follow up on the Emily vein to the Black Rock fault to find the Emily vein apex. Here, again, upon crossing to the hanging wall side of the Black Rock fault, we first encounter the "Pilot" vein, which appellee insists is a branch of

the Emily, extending up to the surface of the Poser claim.

The same situation exists with regard to Diagram No. 4 (Appendix), Section B-B. (Defendant's Exhibit No. 120.) We follow the "View" vein across the Poser south side line plane extending well up within the boundaries of the Poser claim toward the Emily vein, then following the Emily vein up to the Black Rock fault, we first encounter what appellee insists is a branch of the Emily, on the hanging wall side of the Black Rock fault, namely the "Pilot" vein, which also admittedly apexes within the Poser ground.

Therefore, arguing from the premise advanced by appellee, that the "View" and "Pilot" veins are both branches of the Emily, the "Pilot" vein apex must necessarily control the ownership of the ore bodies in question because the "Pilot" vein apexes in Poser ground and the Poser is admittedly the prior claim in point of time of location.

All of appellee's witnesses testified that this segment of vein which apexed in the Poser claim east of the Emily was the "Pilot" branch of the Emily vein. (Sales, Tr. pp. 993-994, 1132-1135, 1233, 1237-1247, 1006-7, 1012, 1028; Steele, 1613-1614, 1556, 1582; Barker, 1470-1476, 1408, 1468, 1499-1504; Bateman, 1371, 1314-1315; Wiley, 1687, 1692, 1758-60.)

3. The Interposition of the Black Rock Fault Admittedly Cutting Off and Terminating the "View" and Emily Veins as They Extend Upward in Poser Ground, Creates a Sub-Fault Apex for the "View" Vein Within Poser Ground.

This situation is portrayed on the three exhibits of appellee, reduced copies of which were referred to in connection with the discussion of the preceding subdivision and illustrated by Diagrams 2, 3 and 4 (Appendix). (Defendant's Exhibits Nos. 119, 120 and 121.) Diagrams Nos. 6, 7 and 8 (Appendix) are portions of these same cross-sections illustrating on larger scale appellee's conception of Black Rock fault conditions in this area. These cross-sections are of appellee's own making. They illustrate its views of the vein and fault occurrence in the easterly 370 feet of the Poser claim, the extralateral sweep of which would include the ore bodies in dispute in the so-called "View" vein.

Examination of Diagram No. 6 shows the "View" vein coming up into Poser ground across the Poser south side line plane and, according to appellee's contention, which was adopted by the trial court, the "View" vein will join with the Emily vein which it is immediately approaching. The Emily vein, continued upward, will be cut off by the Black Rock fault. Then, to carry out appellee's contention, also adopted by the trial court, in order to carry the "View" vein to an apex in appellee's ground, it is necessary to follow downward on the hanging wall side of the Black Rock fault until the hanging wall segment of the Emily vein is encountered. If we project both hanging and footwall segments of the Emily vein from their last indicated positions to the Black Rock fault,

we will have a throw of something over 400 feet, measured along the Black Rock fault between the points where the hanging and footwall segments of the Emily vein will be terminated against the fault, as indicated by such exhibit. Each of the sections in question (Diagrams Nos. 6, 7 and 8) illustrates the same condition with respect to the Black Rock fault where the throw varies from 200 feet on Section B-B to 400 feet on the section passed through the Poser east end line plane. In other words, in order to correlate the Emily—"View" vein through the Black Rock fault and carry it to an apex in appellee's ground, it is necessary to follow from the abutment of the footwall segment of this vein *downward along the fault* for this great distance and pick up the hanging wall segment and thence continue upward to an apex in appellee's ground.

But appellee contended before the trial court that it was unnecessary from a legal standpoint that it should make this connection through. The fact that the apex of the Emily vein exists within its ground at the surface for a length sufficient to cover the ore bodies in dispute in depth, which were also beneath its own surface, in its opinion satisfied the law. It was deemed unnecessary to trace any connection from this apex in its ground down to the ore bodies in dispute and establish identity and continuity of the vein for this distance. It was urged that appellee was not asserting an extralateral right because the ore bodies in dispute were found beneath its own surface. In a limited sense this is true. We must not, however, overlook the vital and all important fact that, according to appell-

lee's own admissions as indicated on its own sections just noted, the "View" vein has been followed up on a uniform dip angle across the Poser south side line plane throughout this entire easterly area of the Poser claim. In order to avoid appellants' contention that this vein was the Intermediate, a branch of the Rainbow vein, appellee deliberately advanced this theory that the "View" vein was a downward departing branch of the Emily vein with which it joined and that, therefore, the rights which were associated with the "View" vein, which their own evidence demonstrated came up into the Poser ground, would be controlled by the Emily vein above the junction. In order to take the Emily vein out of Poser ground to an apex in its own ground, the Black Rock fault must be crossed, as already indicated, and projections of the Emily vein must be made for hundreds of feet through unexplored territory to the surface of appellee's adjoining Millview claim. Proof of the identity and continuity of the Emily vein to an apex in appellee's ground is, therefore, just as important to its contention as if appellee were asserting an extralateral right.

The logic of the situation becomes evident at once if analyzed. The vein segment, called the "View" by appellee, admittedly comes up into the Poser ground in such a position that it will presumptively apex there. Appellee to prevail must show that this vein segment has an apex outside of the Poser claim. When appellee undertakes to place the apex of the "View" vein outside of the Poser claim, it must adduce convincing evidence showing that the "View"

vein is connected in an appropriate manner with such outside apex. In other words, it must establish vein identity and continuity with this asserted outside apex and with the same inevitable consequences that follow in the case of assertion of identity and continuity where an extralateral right is asserted. That this is the correct legal test will at once become evident if we assume a more extreme situation than the one claimed by appellee to exist in this case. Let us assume that, where the merged Emily-“View” vein abuts against the Black Rock fault on the footwall side, it absolutely terminates and its upward extension above the fault cannot be found. It is self-evident that we have here a sub-fault apex. To bring the matter a little closer to the situation here presented, let us assume that the throw on the Black Rock fault has been a thousand feet or over. Will anyone contend that the abutment of the segment of the Emily-“View” vein against the footwall side of the Black Rock fault does not constitute a sub-fault apex? Of what value to appellee would be the hanging wall segment of a vein in its own ground that had been removed a thousand feet from the footwall segment? It is very evident that, unless this hanging wall segment of the Emily-“View” vein can be brought into some reasonable relationship with the footwall segment, the mere existence of the apex of a hanging wall segment of the Emily-“View” vein in appellee’s ground can be of no avail as far as establishing the ownership in appellee of the ore bodies in dispute is concerned. To bring the matter to its logical conclusion, it is appellants’ contention that, because of the admitted displacement on the Black Rock fault, which according to Diagram No. 8,

is as much as 200 feet, and which would appear from Diagrams 6 and 7 to have a much larger dislocation in those sections, there is a sub-fault apex of the Emily—"View" vein where it abuts against the footwall side of the Black Rock fault. Appellee's cross-sections indicate that this apex is well within the Poser claim and beneath Poser surface and so situated that the extralateral right flowing therefrom will necessarily include the ore bodies in dispute.

THE LAW ON THE SUBJECT OF FAULTING OF VEINS.

The principle which has been applied to extralateral cases, namely, that identity and continuity of vein must be established in order to enjoy these rights, is subject to the exception that minor disturbances and slight disruption of vein material by faulting do not operate to destroy these rights. However, the tendency of the courts has been, wherever there is any considerable separation due to faulting, to hold that, for extralateral purposes, the vein segments on opposite sides of the fault are to be considered as two distinct veins.

One of the earliest reported cases involving the subject of faulting of veins is *Butte Co. v. Societe Anonyme, etc.*, (Mont.) 58 Pac. 111. Judge Hunt of this court wrote the opinion in that case for the Supreme Court of Montana, which opinion Judge Lindley refers to as "most instructive and valuable" on this subject of vein identity and continuity. (*Lindley on Mines*, Section 615, 3rd Ed. p. 1471.)

One of the matters in dispute was the fact that in the workings of one of the mines, before the ore bodies in controversy were reached, there was a slight displacement of the vein by a flat fault which passed through it. At this point a "horse" of granite also occurred in the vein. Witnesses testified that the break in continuity varied from about 13 to 17 feet in extent. The trial court instructed the jury as follows:

"Instruction 9: You will understand, however, that a fragment or portion of a vein, although it may be sufficiently identified or recognized, will not in itself give its owner the right to enter upon the ground of another and extract ore from other portions of the same vein; *for if the two portions of the vein, although once together and forming the same vein, have become separated*, and as so separated have formed distinct veins, and the original connection has been so broken or obliterated that such connection cannot any longer be followed, then the owner of the portion having the apex cannot enter through such disconnected portions into the land of another."

"Instruction 11: * * * If it becomes necessary, in order to connect two separate and distinct portions of a vein, *to pass for any considerable distance through country rock*, having none of the elements of a vein, and through which intervening space there are neither minerals or walls or seams to be followed, then it may be concluded that the veins are permanently separated and one cannot be followed from the other through the intervening space into the ground of another."

The appellate court approved in substance these instructions by the trial court and comments on the term "considerable" used by the trial judge in the last instruction above quoted, holding that it was not error to have used this term in this connection. This

case is certainly authority for the fact that where a vein has been separated into two distinct segments, so that the miner has "to pass for any considerable distance through country rock," the vein segments are, in contemplation of law, permanently separated and form distinct veins as far as extralateral pursuit is concerned. We must bear in mind the fact that in this case the interruption of the vein was only a matter of approximately 15 feet.

In the case of *The Iron Silver Mining Co. v. Murphy*, 3 Fed. 368, Judge Hallett, recognized as one of the great mining judges of the west, stated in his instruction to the jury:

"* * * if the vein or lode was formed in the way supposed, in connection with a much larger extent of the same matter, and this part, detached from another, was brought into its present position by some movement of the country, occurring after the lode was deposited, that circumstance will give it unity and individuality as distinguishing it from every part to the west of it. And, if that theory be correct, the occurrence of ore or gangue on the western face of the limestone is not material, for the uplifted part lying on the upper face or plane of the limestone to the eastward, having been detached from the mass of which it was originally a part, gains by that circumstance a new end or terminal point, by which it may be held."

In *Cheesman v. Shreeve*, 40 Fed. 793, Judge Phillips instructed the jury that,

"*Slight interruptions* of the mineral-bearing rock are not alone sufficient to destroy the identity of a vein; nor would a short, partial closure of the fissure have the effect to destroy the continuity of a vein, if, *a little further on*, it appeared or recurred again, with mineral-bearing rock in it."

In *Iron Silver Mining Co. v. Cheesman*, 116 U. S. 529, Mr. Justice Miller intimates that if the fissure and mineral come to an end and is then found "so far off or so far deflected from the original line," it would "constitute no part of that vein". He goes on to state:

"Certainly the lode or vein must be continuous in the sense that it can be traced through the surrounding rocks, although slight interruptions of the mineral bearing rock would not be alone sufficient to destroy the identity of the vein."

More recently a case involving vein faulting has come before this court and is found reported in *Twenty-one Mining Co. v. Original Sixteen to One Mining Co., Inc.*, 265 Fed. 469. The same controversy also came before this court in 260 Fed. 724. The decision of the trial court is found in *Original Sixteen to One Mining Co. Inc. v. Twenty-one Mining Co.*, 254 Fed. 630. There the court found that, where the vein had been dropped down a distance of 15 or 20 feet in one portion of the claim and a distance of 35 or 40 feet at another portion, it could still be considered as one vein. As far as we know, this is the greatest separation by faulting that has ever been held by any court to exist without destroying continuity and identity.

All of these authorities may be summed up by the statement that, where the interruption is short or slight or casual and there is no considerable distance between the severed segments, the extralateral right is not destroyed. On the other hand, however, these authorities are unanimous in holding that, where there

is any considerable break in the continuity, the separated segments become, for legal purposes, distinct veins.

The most recent case that has been decided on this subject of the effect of faulting of veins upon identity and continuity is the case of *Tom Reed Gold Mines Co. v. United Eastern Mining Co.*, (Ariz.), 209 Pac. 283, (*certiorari denied* 260 U. S. 744). The situation presented in that case is illustrated by Diagram No. 9 (appendix), which portrays cross-sections taken through the vein exposures at right angles to the dip at regular intervals along the course or strike of the vein. The Tom Reed Company contended that all of the vein segments appearing on these cross-sections were parts of one and the same vein, and that the faulting did not destroy the right to follow the vein extralaterally, provided these segments could be identified as fragments or parts of the same vein. The trial court found, and this finding was quoted with approval by the appellate court (209 Pac. 286), that these vein segments

“* * * were once connected as a part and parcel of the same general fissure and vein system * * * at some time in the past * * * seems to be the opinion of all of the expert witnesses on both sides.”

The trial and appellate courts, however, found that the dislocation was so great that it treated the three vein segments there involved as separate veins for legal purposes. After referring to the authorities on the subject of vein faulting, the court used the following language:

"These authorities establish the propositions that the terms 'vein,' 'lode,' or 'ledge' import *ex vi termini* an unbroken and uninterrupted continuance of a body of mineral or mineral-bearing rock; that the deposits to which the extralateral right exists must be an integral part of a vein or lode which apexes within the boundaries of the claim and as such is practically continuous and unbroken (*Hyman v. Wheeler*, *supra*); that the lode must be continuous in the sense that it can be traced through the surrounding rocks, and while merely *slight interruptions* of the vein are not sufficient to destroy its identity, nor would short partial closure of the fissure have the effect to destroy its continuity, if it appear or recur again a little further on, such continuity is broken and the lode is not the same, either where the mineral and fissure close and come to an end, and are not found again in that direction, or, if found at all, are far off from the tracing of the vein, or much diverted from its original trend or line, or it appears under different geological conditions and surroundings (*Cheesman v. Shreeve*, *supra*), or where the vein breaks off totally and is interrupted *for a very great distance* (*Stevens v. Williams*, *supra*).

"These authorities further indisputably establish that in determining whether identity exists, the distances separating the deposits claimed to be one vein, as well as the direction and continuity of the vein *in the general plane of its dip and course downward*, are elements of the highest significance and importance."

It will be observed that the court placed great stress on the fact that not only were these vein segments separated sufficiently to destroy their identity, but the fact that the vein could not be followed downward in the general plane of its dip from one segment to the other was to be considered an element of the highest

significance and importance. If we measure the physical separation between the middle segment shown on the Tom Reed sections (Diagram No. 9, Appendix), a portion of which middle segment was found by the trial court to apex within plaintiff's Gray Eagle ground, and the third or right hand segment, we will find that in places the distance between them does not much exceed 100 feet. In most places measured along the fault, the distance between the separated segments, taking into consideration the existence of the middle segment, averages 200 feet. It is true that the two main segments were further apart, being between three and four hundred feet measured either along the fault or horizontally. The court awarded the plaintiff in that case a portion of the intermediate or middle segment, which it found to apex in Gray Eagle ground, but nevertheless refused to award plaintiff any extralateral right based on the ownership of such segment, which would entitle plaintiff to pursue this segment to the fault and across the fault to include the third or right hand segment as shown on the diagram, even though the right hand segment was only separated by a distance of between one and two hundred feet from the middle segment measured along the fault. (As already noted the Supreme Court of the United States refused to grant *certiorari*.)

A similar situation is presented to this court, as illustrated on the three Exhibits Nos. 119, 120 and 121 introduced by appellee. (Diagrams Nos. 2, 3 and 4, and 6, 7 and 8, Appendix.) In order to demonstrate that the apex of the "View" vein does not exist in

Poser ground, appellee claims that the "View" vein, after crossing the Poser south side line plane and entering Poser ground, joins the Emily vein on the footwall side of the Black Rock fault. In this way, it seeks to take the apex of the "View" vein out of the Poser claim and into its own ground, where the trial court found the Emily vein to apex for a distance of 370 feet before it crossed into the Poser claim. It is obvious that in order to do this appellee must follow up on the "View" vein to its junction with the Emily, then up on the Emily vein to its abutment against the Black Rock fault, thence down along the Black Rock fault for a distance, which its witnesses admit must be anywhere from 150 to 200 feet, and which appellee's own cross-sections show must be some 200 to 400 feet, unless the Emily vein goes through contortions which are not proven to exist, and, after following down along the fault plane for this "*considerable*" distance, the hanging wall segment must then be followed up to the surface in appellee's ground. This contention should fail for several reasons. In the first place, measured along the plane of the Black Rock fault on appellee's own cross-section, the throw is at least 200 feet on one of these sections and on the other sections the two segments cannot be correlated without involving a throw of upwards of 400 feet. In the second place, the very fact that appellee does not know, and is not able to portray on its cross-sections, what happens to the two segments of the Emily vein as they approach the fault from the hanging and footwall sides in most of these sections, is an indication that it is dealing with *terra incognita*.

In the third place, to follow the Emily vein across the fault, it will be necessary to follow from the point of abutment of the Emily vein on the hanging wall side of the fault upward for over 200 feet before the abutting segment on the footwall side is reached. Veins must be followed on the "downward course" and not upward, under the express provisions of the Mining Statute. And finally, as indicated on the various cross-sections, the hanging wall segment of the Emily vein is not in the same general plane as the footwall segment. As has already been noted, the courts place special emphasis upon the right to follow a vein "in one approximate plane and not otherwise".

It is true that appellee is not seeking to exercise an extralateral right, but it is seeking to demonstrate that the apex of the "View" vein is not in Poser ground. In order to take the apex of the "View" vein out of Poser ground, it is certainly bound by the same principles which govern the identity and continuity of veins under all circumstances.

4. Angle Formed by Strike of Ore Body With Poser End Line Plane Extended Is Immaterial.

The court in its opinion states that the ore body in dispute in the "View" vein at its southeasterly end forms an angle of less than forty-five degrees with the plane passed through the east end line of the Poser claim. It is true that there are places where this angle is found to be less than 45° , but for the greater part the strike of this ore body approximates 45° . The variation is only 2° or 3° from 45° in most places and when we consider the "View" vein *as a whole*,

the angle is much greater than 45°. Throughout most of the workings in the Poser claim where appellee claims the "View" vein is exposed, and particularly on the Elm Orlu or Poser 2200, 2000, 1700, 1500, 1300 and 1000 levels, this angle is greater than 45° and in places as great as 70°. It would be an interesting procedure to attempt to carve up a warped vein and award to one party or the other segments of that vein on dip or on strike because the angle formed by its local strike and the end line plane happened to vary from place to place and exceed or be less than 45°.

The court cites as an authority that a vein cannot be followed on its strike, rather than on its dip, the case of *Stewart M. Co. v. Ontario M. Co.*, 23 Idaho 724, 132 Pac. 787. While this case does so hold on the facts there presented, where the plaintiff in that case was seeking to follow a vein extralaterally at an angle very nearly parallel with the strike of the vein and where its apex crossed the side line of the claim at almost a right angle, the Supreme Court of the United States refused to endorse this doctrine, stating that, "It is immaterial what view the court had or expressed of the angle the downward course of the dip must be to the strike," 237 U. S. 358, 361.

The Idaho Supreme Court in a later case has itself repudiated the doctrine previously announced by it and cited by the trial court in this case.

In *Alameda Mining Co. v. Success Mining Co.*, 161 Pac. 866, 867, referring to its former ruling on this point it said:

"That statement was clearly *obiter* in that case and is not the law, since the extralateral right con-

ferred by the provisions of section 2322, Rev. Stats. of the U. S., is determined by the apex on the surface upon which the prospector makes his location and the dip of the vein, and not upon the levels in the depths of the earth opened and disclosed in the workings of the mine." (p. 866.)
* * *

"Counsel for respondent lays special stress upon a sentence contained in the Ontario case to the effect that you cannot pursue a vein in the direction of its strike at an angle of less than 45 degrees of its course. As we view it, that statement in that opinion was mere dictum, and we concur in what is said in 1 Lindley on Mines (3rd Ed.) p. 730, at Section 319, as follows: 'We know of no legal principle to support this latter deduction, that an extralateral right cannot be exercised where the angle the extralateral planes form with the line of strike of the vein is less than forty-five degrees. The adoption of an arbitrary angle beyond which such rights may not be exercised is hardly within the province of the courts'." (p. 867.)

This court, the Ninth Circuit Court of Appeals, has consistently expressed a contrary opinion on this very point. In *Last Chance Mining Co v. Bunker Hill Mining Co.*, 131 Fed. 579, 590, this court, speaking through Judge Ross, held:

"While the statute requires parallelism of the end lines, and the courts have held that they may not be laid so divergent as to include more in length upon the dip of the vein than is allowed in length upon the surface, *neither the statute nor any decision to which our attention has been called defines any particular angle at which the end lines shall cross the general course of the vein in order that the extralateral right given by the statute may exist.* And as said by the Supreme Court in the case last cited (*Iron Silver Mining*

Co. v. Elgin Mining Co., 118 U. S. 196, 206), where more than one vein apexes within the surface lines, it would be a physical impossibility for the end lines to be drawn at a right angle to the courses of all such veins. And that the extralateral right conferred by the statute may and does exist without regard to the angle at which the end lines cross the general course of the vein has been held both by the Supreme Court and by this court. *Last Chance Min. Co. v. Tyler Min. Co.*, 157 U. S. 683, 15 Sup. Ct. 733, 39 L. Ed. 859; *Empire State-Idaho M. & D. Co. v. Bunker Hill & Sullivan M. & C. Co.*, 114 Fed. 417, 52 C. C. A. 219, in which last-named case this court awarded the appellant Empire State-Idaho Mining & Developing Co. the right to follow the vein outcropping within the surface boundaries of its San Carlos location between planes drawn down through its end lines at almost, if not quite, as much an angle to the general course of the outcrop of the vein within its surface boundaries as is the angle at which the appellee herein was permitted by the court below to pursue the segment of the vein here in question."

See also the ruling by this court to the same effect in 131 Fed. 591, 596, where this court said:

"And still another point urged by appellant's counsel, to-wit, that the awarding the appellee the extralateral right in question is to permit it to follow the vein more upon its strike than upon its dip, was decided against his contention at the present term, in the case of *Last Chance Mining Co. et al. v. Bunker Hill & Sullivan Mining & Concentrating Co.*, 131 Fed. 579."

This same view of the situation is adopted by Judge Beatty, one of the great mining judges of the northwest, who in the case of *Bunker Hill Co. v. Empire*

State Co., 134 Fed. 268, 272, used the following language:

“Whether the evidence sustains defendant’s contention that complainant, in following the ledge between the planes of its end lines, does so more upon its strike than upon its dip, I have not determined. There is nothing in the mining act that can possibly justify the conclusion that this extralateral right must be limited to 45 degrees, or to any other particular variation, from the true dip. All that this court can do is to follow the rule, as it understands it, adopted by the Supreme Court. That court holds without any qualification that the extralateral right is bounded by the prolonged planes of the legal end lines. I do not desire to add to what I have said in other cases in justification of any adoption of this rule.”

While there are situations where it would seem unconscionable to allow an extralateral right to be exercised in such a manner that the vein would be followed at an angle approximating its strike, such an aggravated condition does not exist here where throughout the greater portion of its disclosed area the “View” vein makes an angle with the Poser east end line plane that is much greater than 45°. If we pause for a moment to analyze the logic of the situation, it is not difficult to conclude that any such rule which would give a segment of the vein to one party for a few feet of its extent and then would necessarily carve out an adjoining segment of the same vein and award it to the other party, because it happened to change on its strike and dip, as many veins do, only serves to emphasize the impossibility of applying any such ruling where, as in this case, the major attitude and

position of the vein in controversy throughout the greater part of its exposed area establishes it to maintain an angle with the Poser vertical end line plane produced much greater than 45°.

5. Intermediate and "View" Veins Are One and the Same Vein as a Matter of Law.

The evidence established without any serious contradiction the following facts:

(a) The Dip of the Two Segments Is Identical.

The admitted segment of the Intermediate vein branching from the Rainbow extends from its known exposure on the 1000 foot level down to the 1700 foot level, a distance of some 700 feet, maintaining a substantially uniform dip all the way. Then, what appellees claim to be the distinct "View" vein, necessarily having the same uniform dip above where it exists and is co-extensive throughout with the Intermediate vein, continues on the same substantially uniform dip to the 2500 level and below. Appellee's own cross-section exhibits (Defendant's Exhibits Nos. 120 and 121) copies of which on a reduced scale appear as Diagrams Nos. 3 and 4 (Appendix), and also its large cross-section exhibit No. 309 (Defendant's Exhibit No. 122), a cross-section passed through the middle of the Poser claim, a reduced copy of a portion of which is inserted as Diagram No. 10 (Appendix), illustrate this identity of dip continuation in substantially the same plane. Both large skeleton models also show this, particularly appellants' Exhibit No. 31, where the levels in which this vein is exposed have been colored pink.

(b) The Strike of the Two Segments Is Remarkably Similar.

The strike of the Intermediate vein above is substantially identical with the strike of the claimed "View" vein below for hundreds of feet. This appears on the models and plan maps. We have inserted in the Appendix Diagram No. 11, a composite of the strike of these vein exposures as disclosed on the various levels projected onto one plane, to illustrate this remarkable uniformity of strike throughout. The strike of what appellee claims to be its "View" vein in the lower levels conforms substantially with the strike of what is admitted to be the Intermediate vein exposed in the 1000, 1300 and 1500 levels, which is also necessarily the strike of the alleged "View" vein in those upper levels.

(c) Width of Both Segments Is Similar.

Both vein segments are admitted to have the same general width above and below the alleged disruption.

The various level maps illustrate this similarity of width of the combined Intermediate—"View" vein above and the "View" vein below.

Dr. Bateman testifying for appellee says the Intermediate vein in the 1550 drift west of the 1551 cross-cut is 6 or 7 or 8 feet wide. (Tr. p. 1343.) Mr. Burch for appellants says the stopes on the 3000 level started in ore averaging 6 or 7 feet in width. (Tr. p. 163.)

(d) Mineralization of Both Segments Is Similar.

There is no dissimilarity in the character of mineralization of the Intermediate vein above and the al-

leged "View" vein below, which would lead anyone to believe that there were two distinct veins.

Appellee's witnesses could point out no distinguishing characteristics in the mineralization of the upper and lower segments and utterly refused to attempt any differentiation between the mineralization of the alleged "View" vein where they asserted it was coincident and coextensive with the Intermediate vein throughout hundreds of feet of workings.

(e) **One of Appellee's Main Witnesses Admits the Existence of a Connecting Strand Between the Two Segments.**

One of appellee's most important witnesses, Mr. Wiley, as evidenced by the fact that his testimony was reserved for the close of their main presentation, admitted that one strand of the Intermediate vein extended along the 1550 drift, reuniting with the alleged "View" vein, coming up from below and appearing in the 1736-A raise. This situation is illustrated by Diagram No. 12 (Appendix). Appellee claimed the Intermediate vein separated from the "View" vein in the 1583 crosscut, being the northerly strand. Appellants then drove the 1588 drift through to a connection with 1550 drift. Mr. Wiley's testimony is as follows:

"It would seem as if the second period fissure there, like the Black Rock fault is in many places, as it goes toward the west, had followed the pre-existing fissure occupied by the Intermediate vein. You cannot put you finger on any specific point there as you go to the west—at least, I can't—but there is one significant feature there in the drift, as it came from the west, there was a plain departure of the Intermediate vein to the west—

to the north. *There has been some recent work driven through there purporting to follow this northern branch, which is the Intermediate vein, and it does follow it for a ways and follows it to a junction apparently, with the branch followed in the original drift, but there are still two other prominent and decided branches extending back into the wall to the north, and I think that they are most likely the Intermediate vein.”* (Wiley 1713.)

Mr. Wiley, on cross-examination, was asked whether he did not testify on direct that this strand of the Intermediate vein had been “found to swing back into 1550 drift”. He replied:

“A. One branch, but there are two other branches or streaks going off on the left, the footwall, that have not been proven return.

Q. Well, if one branch returns, it is nevertheless a continuous vein through the 1550 drift, isn’t it?

A. *Through the new branch of it, yes.*

Q. So that the fact that two branches may turn off into the footwall of the vein *does not destroy the fact that there is a continuous tracing of the vein through 1550 drift*, now, in your opinion?

A. *No, but it throws doubt on the identity of the vein in the east end of the drift.*

Q. You are not prepared to testify that it is not the same vein

A. No, I am only prepared and testify that as that vein comes to the west—into the southeast, rather, that where it meets the Emily, it is not a junction, and whether these other branches would then have the same relation to the Emily or not, I really don’t know in the absence of development.

Q. Well, you do know the habit of these east-west veins to branch; the Rainbow had quite a confirmed habit of branching, did it not?

A. Yes, I think all veins have branches.

Q. So the fact that two of the branches may have turned out at 1550 drift does not throw any doubt on the proposition that one branch of the vein is followed continuously through drift 1550 from the top of 1736-A raise?

A. Possibly followed, *perhaps both veins are in the drift for a ways; it is rather an unusual condition* but it is entirely possible.

Q. And where would you say going westwardly in 1550 drift that both veins were not together in the drift?

A. The Rainbow lode branch of this Intermediate vein is not disclosed in the most eastern end. That is, the vein that unites.

Q. You mean the most northerly, not the most easterly?

A. Well, it is northerly there; that is a two branch vein; the most northerly branch of these two." (Wiley 1811-1818-1819.)

We have, then, one of appellee's own witnesses admitting a connecting strand of the Intermediate and "View" veins uniting beyond the place where appellee attempted to separate them.

(f) **The Intermediate Vein Is Only Found in Conjunction With the "View" Vein.**

Appellee's witnesses all testified that the alleged "View" vein merged with or at least became coincident with the Intermediate vein throughout hundreds of feet of workings, and, as pictured on their exhibits, extending from the 1700 level up to the 1000. In fact, wherever the Intermediate vein is found in any of these workings, extending from the 1000 level down to the 1700 level, it is admittedly found in immediate conjunction with and coextensive with the alleged "View" vein, and it is found nowhere else.

- (g) Appellee's "View" Vein Is So Interwoven and Intimately Bound Up With the Intermediate Vein, Coinciding With It Throughout Such a Great Area, That the Two, for Legal Purposes, Cannot Be Disassociated and Identified as Two Separate Veins.

After the two vein structures, the Intermediate and the "View," had come together in this upper area and were found running along, side by side, as appellee's witnesses claimed, not one of them was able to point out any vein structure in this alleged merged area, that he could identify as one vein or the other, except that arbitrarily the "View" vein was referred to as the "fault gouge," running along with and coincident with the Intermediate vein and yet the "View" vein where it is not coincident with the Intermediate vein is a vein of substantially the same width as the Intermediate. Why this sudden shrinkage in size of the "View" vein? Appellee's witnesses absolutely ignored the fact that their "View" vein, in the immediate vicinity of what they admitted to be the Intermediate vein, possesses the same general width, strength and vein structure as the Intermediate vein, and yet, when the so-called "View" vein becomes coextensive with the Intermediate vein, they cannot tell one vein structure from the other. It is no wonder that, when they were cross-examined on this subject, their opinions were hazy and their answers indefinite.

Appellee's exhibits and testimony indicate that the "View" vein is found in juxtaposition to, and coextensive with, the Intermediate vein from the 1000 Poser down to the 1700 Poser level, a dip distance of over 700 feet. Also on strike, from the extreme westerly (2200 co-ordinate) to the extreme easterly (1600 co-ordinate) exposures, where appellee admits the In-

termediate vein to exist, the same condition is found for distances of from 400 to 600 feet on each level.

Mr. Sales, the chief geologist in charge of appellee's geological work, on direct examination described:

"a vein encountered coming in from the east which shows also in crosscut 1583, and westerly in 1550 drift. There are two veins, *or possibly* a strike faulting of this northwest fault along the vein coming from the east. And this same condition is shown in the 1300 foot level and on the 1000 foot level where there is undoubtedly a vein which appears to be of east-west age, and the View vein encounters it and is marked only by a gouge along this drift and along those stopes. That is the condition on the 1000 and also on the 13." (Sales 1094.)

On cross-examination he was asked whether one vein was

"followed continuously from the point where the 1550 drift intersects 1583 crosscut down on the various levels and through these raises into those stopes." (1260.)

and he answered "I think that is correct". (1260.) He was then asked whether

"from that point to the westerly on the 1500, and the 1550-A raise, and from there up to the 1300 level and then over into the Rainbow vein, there is no difference between the Plaintiffs and Defendant, but one vein has been followed, is there?

A. Yes; there is a difference there." (Sales 1260.)

When asked what the difference was he replied:

"A. What I said this morning was that *the View vein* was of northwest age, and it *came up and followed along these large stopes in this Intermediate vein*, as claimed by the plaintiff, so

there is that difference, that where the plaintiff claims that these stopes are on the Intermediate vein and no other vein; this northwest fissure which comes up and is called *the View vein also follows along these drifts.*

The COURT.. *Are you characterizing those red stopes you touch as a part of the View vein?*

The WITNESS. It shows on the level; of course it meets in the stopes above there, except these large stopes—it would be a continuation, and *the two veins would be in there together.*

Q. By Mr. HIGGINS. Do you mean to say that the View vein you follow along in 1338 drift over to its point of contact with the Rainbow vein is in the westerly end of 1336 drift?

A. That is what I said. This northwest fissuring which is *the View vein follows along in this drift, and the strong gouge could be followed all along in these drifts up to the point where the Rainbow vein is reached.*

Q. *Then the View vein is followed all along in the 1338 and 1336 drifts to a point of contact at least with the Rainbow vein?*

A. Yes.

Q. *And this stope is in the View vein?*

A. No; it is in both of them.

Q. In both of them?

A. Yes, but I stated there that the Intermediate vein was undoubtedly a considerable branch of the Rainbow, but the View vein had come along and could be followed up this strong gouge in this east drift.

Q. Do you trace that gouge through 1334 drift?

A. No; it comes up where drift 1336 meets 1334 drift; this strong gouge continues along the south side of the drift and turns into the 1334 drift.

Q. It does not run out of 1334 drift, does it?

A. No.

Q. *So the last we see of the Mill—of the View vein—which is it?*

A. The View.

Q. *Of the View vein, is that it is enclosed as a gouge within the Rainbow vein?*

A. That is right.

Q. Then this working 1336 and 1338 drift, and 1550 raise and 1550 drift and 1736-A raise and thence on downward to the stopes in controversy, in what we call the Intermediate vein, is all on the View vein?

A. Yes; did you include 1338?

Q. Yes.

A. No; I said *this portion of it had both of the veins.*

Q. Well, that is—at least has *all down through those workings the View vein?*

A. Yes.

Q. *And for this distance it has also the Intermediate vein in it?*

A. *That is true.*" (Sales 1261-1262-1263.)

Now, it is important to note the change that took place in Mr. Sales' mental processes during the intervening few days before he went on the stand again in sur-rebuttal. Counsel for appellants on cross-examination referring to the vein coming up into the stub raise right at the top of 1736-A raise, asked him:

"Q. That is what you say is the upward extension of the View vein?"

A. Yes.

Q. And that is what you testified in direct examination you recognized as a gouge following along the line of the Intermediate vein in 1550 drift?

A. *I did not recognize it there as the View vein; I said we have here a vein united with the Emily, which is followed westerly until it comes in contact here and I said that westerly from there, there was a gouge along this Intermediate drift. If I said that was a View vein gouge—*

Q. (interrupting). Well, didn't you testify di-

rectly and repeatedly on cross-examination that you thought this View vein gouge, which was only a gouge where it lay alongside the Intermediate vein in the 1550 drift and the drifts above was followed right into the Rainbow vein and was lost in the middle of the Rainbow vein?

A. *I said there might be a gouge there, but I could not identify any gouge along through here.* A gouge comes in that follows along this vein, *but out westerly from here I would not attempt to say that that is a View vein gouge.*

Q. Didn't you so express your belief on direct examination and say that a gouge of the View vein followed along in the same drift as the Intermediate and was lost in the body of the Rainbow vein?

A. *I said it was lost after it got into the Intermediate, and that there was a gouge continuing on out in the Rainbow drift.*

Q. Yes, and you thought it was the View gouge which was lost within the body of the Rainbow?

A. *I said it might be, if the View gouge comes in here, I said it might be, yes.*

Mr. HIGGINS. Very well, that is all." (Sales 2186-2187.)

A comparison of this testimony given but a few days apart is of extreme importance as illustrating the partisanship of this particular witness. On direct he distinctly testified, in answer to an inquiry from the court, that he finds the "View" vein in the red stopes appearing on appellee's model between the 1300 and 1000 Poser levels in the Poser claim just where the Intermediate vein separates away from the Rainbow, adding that "the two veins would be in there together" and that the northwest fissuring of the "View" vein could be followed all along in these drifts up "to a point of contact, at least, with the Rainbow vein", and that "the View vein * * * is enclosed as a gouge in

the Rainbow vein". Yet, when he testified on rebuttal eight days later, he stated positively, in answer to an inquiry as to whether on direct he did not testify that he recognized as the "View" vein the gouge followed along the line of the Intermediate vein in the 1550 drift to the west, "I did not recognize it there as the View vein". He added, "there might be a gouge there, but I could not identify any gouge along through here" * * * "I would not attempt to say that it is a View vein gouge". Pressed further he stated "*I said it was lost after it got into the Intermediate*, and that there was a gouge continuing on out in the Rainbow drift." It is apparent that this witness had, in the few intervening days, materially altered his views on this particular feature.

Mr. Wiley, also testifying for appellee, is much more cautious about this and has many reservations. He refers "to a peculiar condition" and says

"it would seem as if the second period fissure there, like the Black Rock fault is in many places, as it goes toward the west, had followed the pre-existing fissure occupied by the Intermediate vein. *You cannot put your finger on any specific point there*—as you go to the west—at least, I can't—but there is one significant feature there in the drift as it comes from the west, there was a plain departure of the Intermediate vein to the west—to the north." (He is referring to the northerly exposure in the 1583 crosscut near 1550 drift.) (Wiley 1713.)

When asked on cross-examination:

"Q. Now, you follow that same streak of mineralized vein and gouge to the westerly in 1550 drift until you come to 1551 crosscut, don't you?"

A. You follow it for a ways; I don't know exactly how far.

Q. You testified this morning that you followed it continuously through?

A. Perhaps that is true, yes. There are a series of fractures through there, so there is some doubt as to the portions." (Wiley 1817.)

When asked whether he agreed with the mapping of his associates in placing the "View" and Intermediate veins side by side and labeling them as different veins for hundreds of feet through the raises and levels, he answered:

"that may be right, although I cannot say that I am positive as to connections.

Q. Well, wouldn't it be a little absurd in your opinion, [Mr. Wiley], to say that you had two veins running along together, one of them being colored in blue and running across the other, and still going on as a separate feature, and the other being in red and running across the blue?

A. *It is a possibility*, especially if they diverge below. It has been proven though, they might be anything but absurd." (Wiley 1822.)

When asked whether he would place the "View" vein along the Intermediate as a distinct streak of gouge running into and lost in the Rainbow while the Intermediate quartz united with the Rainbow, as Mr. Sales had done, he answered:

"No; there is a streak of gouge there, but I have not correlated that with the northwest vein, although there are indications of it * * * I don't know that they run for many hundreds of feet." (He attributed all the mineralization to the Intermediate.) (Wiley 1823.)

When asked whether there was any mineralization on the "View" vein where it was found running alongside of the Intermediate he answered:

"I don't know that there is that you could pick out and definitely distinguish from the other.

Q. Well, if there is, there is a union then?

A. Not necessarily.

Q. It is not your thesis that they can run along together side by side as part and parcel of one feature and still not be united, depending upon your declaring that the View vein is only gouge through there?

A. Not at all; you may have two streaks of quartz in the same fissure. It would be very unusual. *I would expect them to be one vein, unless you had very definite proof to the contrary.*" (1824.)

He then compares the situation to the Black Rock fault running with the Rainbow vein for thousands of feet, entirely ignoring the fact that the Black Rock fault has never been called a vein at any place throughout its extent, whereas his "View" vein is very distinctly a vein in the opinion of appellee's witnesses, with plenty of mineralization as soon as it leaves the Intermediate. (Wiley 1825.)

According to Mr. Steele's opinion (Mr. Steele was another permanently employed geologist of appellee), the "View" vein becomes a strike fault along the Intermediate vein.

"Q. And is nothing but a fault westerly from this point?

A. Well, yes, it is more than a fault, because along even in this 1550 and down in the 1736 drifts there, why, there is some mineralization with it; it is a typical small northwest vein.

Q. Well, does the mineralization of this View vein coalesce and unite with the mineralization of what is represented as in red, as the Intermediate vein, or the branch of it in drift 1550?

A. Oh, I don't think so; *you can't tell very well.*" (Steele 1627-1628.)

When further pressed to tell how far along 1550 drift he found mineralization of the "View" vein with that mineralization ending, and the Intermediate mineralization beginning, he answered:

"*There is no telling*" and repeated "you find this strike fault all along that vein."

"Q. But you don't find the mineralization of the View vein extending along parallel or next to the mineralization of the Intermediate vein at all?"

A. *I wouldn't know anything about that at all*
* * *

Q. But you wouldn't say that there is any union of the mineralization there?

A. *You cannot tell.*" (Steele 1628-1629.)

Dr. Bateman finds these two veins in these upper workings side by side. (Bateman 1341-1343.)

Mr. Barker also testified to the same situation, and says with reference to the 1300 level that the 1336 drift

"follows principally on Rainbow mineralization, and also on the View vein." (Barker 1446.)

He is obviously referring to the Intermediate branch of the Rainbow vein for the main Rainbow does not appear in the 1336 drift.

On the 1000 Elm Orlu, or Poser level, he states:

"A. *The combined View vein and Rainbow structure* are found by following the east end of 1060 drift on the 3rd floor." (Barker 1447.)

It is not often that one runs across as remarkable a theory as this. A vein is followed from stopes in the lower workings up through raises and drifts as a

strong persistent vein of remarkable uniformity on strike and dip and general width to the 1500 level where, at the easterly end it runs "head on" into another vein in the same plane having the identical strike and dip and general width, and suddenly, losing all of its previously existing mineralization it becomes only a gouge streak coinciding throughout with this other vein above, which, by some sort of magic, absorbs to itself all of the mineralization from there on where they exist side by side. It taxes our imagination to conceive of such a situation, and it is no wonder that Mr. Wiley, Mr. Sales and Mr. Steele are considerably troubled in attempting to reconcile these peculiar conditions, as is very evident from a reading of their testimony, on this feature.

It will also be noted by an inspection of the 1300 level map (Appellee's Exhibit No. 103) that the "View" vein is shown throughout the extent of the 1336 and 1338 drifts as a blue gouge situated on the hanging wall of the Intermediate for a portion of the distance and on the footwall toward the westerly end —having completely crossed the Intermediate structure in this drift. This same situation of the "View" vein passing completely through the Intermediate is represented on appellee's exhibit of the combined Intermediate and "View" veins on their B-B section (Appellee's Exhibit No. 121), a portion of the same being inserted in the appendix as Diagram No. 13.

It will be noted that appellee carries the Intermediate vein from the 1500 level down to the 1700 level alongside of its "View" vein. (Appellee's Exhibit No. 121, cross-section B-B.) Appellee's wit-

nesses testified that the "View" vein had mineralization extending along it between the 1500 and 1700 levels and, unless the "View" vein has again fortuitously become divested of its mineralization and exists only as a gouge streak in section B-B, there must necessarily be a junction of mineralization through this area of 200 feet or more, as measured along the dip of this vein structure.

It will also be noted that the blue "View" vein crosses from the hanging wall of the Intermediate vein below, to the foot wall of the Intermediate vein above, being thus thoroughly incorporated into the structure of the Intermediate mineralization.

When the principal witness for appellee, Mr. Sales, asserts that both the Intermediate and "View" veins are found in all of these hundreds of feet of upper workings "together" and "in contact", and when as astute and clever a witness as Mr. Wiley could not "pick out and definitely distinguish" the mineralization of one vein from the other and would "expect them to be one vein" unless he had very definite proof to the contrary, and when Mr. Steele, for appellee, "can't tell very well" whether the mineralization of the "View" vein coalesces and unites with the mineralization of the Intermediate vein and, when pressed further as to where the mineralization of one vein ended and the other began, said, "there is no telling", "I wouldn't know anything about that at all", "you cannot tell", and when Mr. Barker, also for appellee, speaks of "*combined* View vein and Rainbow structure", using the latter term for Intermediate vein as

the context shows, it is respectfully submitted that for all legal purposes the two veins, assuming there are two, have become merged and indistinguishable and, therefore, are to be treated as a single vein.

Appellants contend that, arguing from these admitted and uncontested premises, namely, where we have vein structures in such immediate relationship, with uniform dip, strike, width, similarity of mineralization and juxtaposition, and actual contact, throughout hundreds of feet of workings in levels and raises, and where even appellee's witnesses cannot pick out and differentiate the mineralization of one vein from that of the other *at any point throughout these hundreds of feet of contact*, then, in contemplation of law, these two vein segments must be treated as merged and identical and they cannot be differentiated when it comes to determining extralateral rights.

The inconsistency and partisanship of the trial court in rendering its decision in this case cannot be better illustrated than by the fact that because minor strands only of the Emily and alleged "View" veins are found in the easterly end of the 1550 drift and entirely without the Poser claim, to be parallel and in contact, and the mineralization indistinguishable according to the testimony of some only of appellee's witnesses, for a distance of 15 or 20 feet or so on strike only, they are held to have joined and to be of the same age. And yet when we have two alleged veins parallel, with their entire structure in contact, with respective mineralization indistinguishable at all points, and coextensive for hundreds of feet on both dip and strike and all within

Poser ground, they are regarded as distinct veins of different age!

THE INTERMEDIATE ("VIEW") VEIN APEXES IN POSER GROUND.

No matter what assumption is made with regard to the Intermediate "View" vein, it apexes in Poser ground. There are four alternatives which will be discussed in the following order:

- (1) That we are dealing with the Intermediate branch of the Rainbow vein.
- (2) That the "Pilot" and "View" veins are both branches of the Emily.
- (3) That the Black Rock fault creates a sub-fault apex for the joined Emily—"View" vein.
- (4) That the Emily apex alone controls.

Diagram No. 14 appears in the appendix to illustrate these possible alternatives and the geology is taken from appellee's exhibits. It illustrates the relationships existing between the Poser surface boundaries and the various features vital to this discussion. It should also be kept in mind, as is evidenced by Diagrams Nos. 2, 3 and 4 (Appendix), which are reduced copies of three of appellee's cross-sections passed through the easterly portion of the Poser claim, that the vein in question admittedly comes up from the ore body in controversy and crosses the vertical south side line plane and also the east end line plane of the Poser claim extending far up into Poser subsurface on a uniform dip and is found exposed in the 1500, 1300, and 1000 Poser levels.

Alternative 1. If, as the testimony of appellee's own witnesses shows, the so-called "View" vein and its mineralization, extending for hundreds of feet throughout these Poser levels and raises, cannot be separated and distinguished from the Intermediate branch of the Rainbow vein, then physically and legally they must necessarily be treated as a unit for extralateral purposes and the apex of the Intermediate vein becomes the legal apex of the "View" vein also. Since the Intermediate vein is admittedly a branch of the Rainbow vein, the Rainbow apex becomes the apex of the Intermediate. The fact that the Rainbow vein apexes in the Poser claim throughout, crossing both end lines, is admitted. The Rainbow vein dip varies from a steep northerly to a steep southerly dip in various part of the Poser claim but even down as far as the 2000 and 2200 Poser levels it is found well within Poser vertical boundary planes, so that the Rainbow vein hangs as a great sheet or blanket from its apex crossing both end lines down to these lower workings within Poser subsurface territory. An examination of Diagram No. 14 (Appendix) will indicate that the Rainbow apex at the surface for the greater part of its length actually overhangs and is found to the south of the Intermediate vein exposures there shown on the lower levels and, since the Intermediate vein has a distinct southerly dip in all these levels below, coming up under this overhanging Rainbow vein and apex, it must inevitably join with the Rainbow far beneath the surface. The Intermediate vein is admitted by appellee to join and be a branch of the Rainbow. It cannot possibly get out of Poser ground

and apex to the north because the Rainbow hangs as a continuous sheet to the north and the Intermediate vein, according to the witnesses of both sides, is a branch of the Rainbow. The skeleton models illustrate this situation in three dimensions even more forcibly. As to the fact that the Intermediate vein must necessarily apex in Poser ground, also see the following testimony: Lawson, Tr. pp. 928-9; Mead, 684, 686, 690.

Alternative 2. If the "Pilot" and "View" veins are both branches of the Emily, as appellee contended throughout the trial, and assuming the "View" and "Intermediate" are distinct veins that do not join, then, as has already been pointed out in this brief hereinbefore, the "Pilot" apex within the senior Poser claim will necessarily control and determine the ownership of the ore bodies in question in the "View" vein. The position of the "Pilot" apex as claimed by appellee appears on Diagram No. 14 (Appendix), and extends westerly for a sufficient distance to cover the "View" vein up to the 370 foot point, where the court found the Emily apex to enter the Poser claim, and from there on westerly the Emily apex in Poser surface would continue the ownership by appellants of the extralateral sweep on the "View" vein.

Alternative 3. Assuming that the 200 foot throw of the merged Emily—"View" vein creates a sub-fault apex where the footwall vein segment abuts on the Black Rock fault, this sub-fault apex will be found at all points well within Poser subsurface, as is demonstrated by defendant's own cross-section exhibits inserted in the appendix as Diagrams Nos. 2-4 and 6-8 inclusive.

Alternative 4. Assuming that appellee is the owner of the segment of the "View" vein within the easterly 370 feet of the Poser extralateral sweep, the fact that the Emily vein apex enters the Poser claim at that point and extends westerly therein almost to the Poser west end line necessarily gives the Poser claim extralateral rights on the "View" branch of the Emily vein for the balance of this distance. The Emily apex throughout this distance, as is indicated by Diagram No. 14 (Appendix), actually overhangs the "View" vein coming up from below. Since the "View" vein dips to the south and the Emily vein dips steeply to the north, they cannot avoid joining, on the assumption that the "View" is a branch of the Emily as the trial court found.

BURDEN OF PROOF.

Before concluding this discussion of the Intermediate—"View" vein situation, we desire to call attention to the measure or burden of proof in this particular relation. The general rule governing the extralateral situation, of "hands off" of everything within the vertical boundaries of a mining claim, unless vein identity and continuity are established by the apex proprietor seeking to invade those boundaries, is familiar to this court. The extralateral claimant has "the laboring oar". Nevertheless, where, as in this case, by explicit admission, the vein in controversy has been followed up from the ore body in question in depth and is recognized to exist within the vertical boundaries of the Poser claim with iden-

tity and continuity unbroken, the burden of proving the extralateral existence of such vein has been met. It is then incumbent on the party seeking to avoid the extralateral invasion of his subsurface territory to meet the issue and come forward with proof, adequate and satisfactory to overthrow this *prima facie* admitted case and to establish, if possible, that the admitted existence of the vein in question extending up into the subsurface of the adjoining claim does not after all justify the exercise of such asserted extralateral right. In other words, the apex proprietor is entitled to the benefit of all presumptions of fact which rationally flow from other proven or admitted facts.

As Judge Lindley in his classic work on the law of mines has expressed the rule:

“* * * so far as the conditions within his own boundaries are concerned, he (an apex proprietor) is entitled to such presumptions of facts as rationally flow from other facts satisfactorily established.” (Lindley on Mines, Sec. 615, p. 1468.)

“He (the apex proprietor) is certainly entitled to the benefit of all presumptions of fact which logically flow, in common mining experience, from other facts which may be proved.” (Lindley on Mines, Sec. 866, p. 2170.)

For example, when a vein or its apex has been proven to exist and continue for a certain distance in a claim, it will be presumed that it still continues on in that same general direction through the claim and even that it crosses the end lines of the claim if such continuation and crossing are the reasonable inference from the proven or admitted facts.

Judge Hunt instructed a jury to this effect in the famous *Drumlummon* case. See,

Montana M. Co. v. St. Louis Co., 147 Fed. 897, 910.

Judge Dietrich has expressed a substantially similar view in *Bourne v. Federal Co.*, 243 Fed. 466, 469, and so did Judge Beatty in *Carson City Co. v. North Star Co.*, 73 Fed. 597, 602.

(B) THE POSER VEIN.

The Poser vein, as claimed by appellants, is disclosed in the workings colored in red on appellants' large skeleton model. (Plaintiffs' Exhibit No. 31.) The position of the apex of the Poser vein on the surface with relation to Poser claim boundaries is shown on Diagram No. 1. (Appendix.) As will appear from appellants' large model, Exhibit No. 31, the Poser vein has been followed up to the surface of the Poser claim in a series of raises called the west end raises and the east end raises, situated near the respective ends of the Poser claim. These raises are further illustrated on Diagram No. 15. (Appendix.)

The Poser vein has also been developed on various levels, both within Poser ground and also beneath the surface of appellee's mining claims. The 700 level was selected by appellants for continuous development from end line to end line of the Poser claim, because on this level the Poser vein was well within the south vertical side line plane of the Poser claim, and, maintaining the same general dip, was followed by

both the west and east end series of raises to its apex at the surface.

The trial court in its opinion divided the Poser vein into three segments:

- (a) That segment of the Poser vein lying east of the northwest striking Emily vein.
- (b) That portion of the Poser vein extending from the Emily vein westerly to its intersection with the Black Rock fault.
- (c) That portion of the Poser vein extending from its intersection with the Black Rock fault westerly to the west end line of the Poser claim.

These three segments are illustrated on Diagram No. 17 appearing in the appendix to this brief. The extreme easterly and westerly limits of this diagram are approximately at the easterly and westerly end lines respectively of the Poser claim. On the upper portion of this diagram is represented the Poser vein on this level as claimed by appellants and immediately below is appellee's interpretation of the geology on this level, as shown on Plaintiffs' Exhibit No. 67 and Defendant's Exhibit No. 98, respectively, being their plan maps of the Poser 700 level, the level being duplicated on this diagram for comparison purposes. On this diagram the segment marked "E" represents the Poser, or as appellee labeled it, the "Pilot" vein east of the Emily vein. The segment marked "C" represents the Poser vein west of the Emily to the Black Rock fault intersection, as claimed by appellee. The balance of the diagram to the west end line rep-

resents the Poser vein throughout these areas. We will treat these three segments in the order indicated.

(a) The court found that in the easterly portion of the Poser claim there was a vein which the appellants called the "Poser" and appellee the "Pilot", the apex of which entered the Poser claim at its southeast corner, and that this vein coursed northwesterly to the east side of the Emily vein. Both sides conceded this to be a vein and were in general agreement as to its position in the ground in the Poser claim as far down as the Poser 1000 level. Below this level none of appellee's witnesses was able to point out or identify this so-called "Pilot" vein, though there were workings in the immediate vicinity where it should have been disclosed, if it occupied the position in the ground claimed for it by appellee. Appellee claims that this "Pilot" vein segment is a northwesterly extension of the "Pilot" vein known to exist in its own ground to the southeast, and, since the "Pilot" vein in its own ground was, as testified to by its witnesses, a branch of the Emily, that therefore this claimed extension of the "Pilot" vein in Poser ground was also necessarily a branch of the Emily in that ground. One of its witnesses, Barker, testified to having actually seen a junction of the "Pilot" and Emily veins in the Poser claim workings. (Tr. pp. 1471-1473.) It was by reason of this alleged junction with the Emily that appellee explained the claimed non-existence of the "Pilot" vein west of the Emily.

On the other hand, appellants contend that this vein segment east of the Emily, admitted to exist down to

the 1000 level, is the easterly continuation of the Poser vein and that at the 1000 level it changes from a slight northerly dip above to a steep southerly dip below, as is illustrated on appellants' large map (Plaintiffs' Exhibit No. 78), being a cross-section through the eastern portion of the Poser claim at right angles to the general course of the vein. Also see Diagram No. 15 of the appendix, where this situation is shown on the right hand line of raises.

It is literally true, as the trial court stated, that none of the ore bodies in dispute exist in this portion of the Poser or "Pilot" vein *east of the Emily vein*, but, as a matter of fact, this segment of "Pilot" vein does cover a certain portion of the Poser extralateral sweep which in depth embraces certain of the most easterly of the ore bodies in dispute. The court should, therefore, have considered the situation presented by the exposures in the raises at the east end of the Poser claim below the 1000 level, which appellee claims is only Black Rock fault and which appellants claim is the Poser vein.

(b) The middle segment of the Poser vein lying west of the Emily, in Poser ground, and extending westerly from that vein for some two to four hundred feet, the court found to be "northwest, oblique, transverse, criss-cross and network structure", and held that it was "nothing but the conjugated fracturing and stock work of the Elm Orlu case." (Tr. p. 2239.)

The court held that this structure, even if of commercial value, would be, at the most, a deposit of ore

adjacent to the Emily vein, but not itself a vein. (Tr. p. 2240.)

(c) Extending westerly to the Poser west end line from this mineralized network structure, for a distance of four hundred to six hundred feet, the trial court also refused to find the Poser vein existed at all, but held that this structure claimed by appellants to be the Poser vein was "naught but the Black Rock fault." (Tr. p. 2246.)

In this connection it should be noted that appellants sought on rebuttal to overcome appellee's contention that what appellants claimed to be the Poser vein was only the Black Rock fault throughout this area, by producing careful assays made of the Black Rock fault gouge and also assays of the wide mineralized areas constituting the Poser vein as distinguished from the fault fissure. In spite of the fact that appellants had no means of anticipating this defense by appellee and could not, therefore, have been expected to produce this evidence in presenting their direct case, the court refused to consider it and excluded it. The error in the court's ruling and the admissibility of this evidence will be taken up for discussion in a subsequent portion of this brief.

**APPELLEE'S CHIEF GEOLOGIST ADMITTED THE EXISTENCE
OF THE POSER VEIN OF STEWARD AGE YEARS BEFORE
THIS LITIGATION.**

There are certain outstanding facts bearing upon the existence of the Poser vein, which should be kept

prominently in mind. In 1913, long before this litigation arose or was even thought of, Mr. Sales, chief geologist and one of the principal witnesses for appellee, wrote a monograph entitled: "Ore Deposits at Butte, Montana". In this monograph, in his discussion of "Steward fissures", he designates, "the most prominent members of this series", and among them he names the "Poser". (Tr. pp. 1183-1184.) He testified, at that early date when he included it as of Steward age, that he had seen this "Poser" fissure on the 1800 and 1300 levels of the Badger mine. (Tr. pp. 1177-1180.) The point where he had seen this fissure on the 1800 level is where appellants now place their Poser vein. (Tr. p. 1177.)

In this same monograph he states that the older veins of the district had been "enormously enriched by faults of the Steward system", and he was of the opinion that in the case of the older veins, where they had been reopened by the newer ones, "the enriching influence upon the old vein filling might be very great." (Tr. pp. 1208-1209.)

In another professional paper he stated that it might be many hundreds of feet below the oxidized zone, extending down from the surface, before an ore shoot would be encountered in such a vein. (Tr. p. 1605.) He also testified that the Steward veins in this district were:

"characterized by being barren and containing nothing above the 1000 or 1200 levels, except altered granite and perhaps a few stringers of quartz and a little pyrite." (Tr. p. 1189.)

He again testified that in veins of this character the zone of oxidation or leeching might extend down hundreds of feet before any large ore bodies were reached. (Tr. pp. 1198-1199.)

THE ASSAYS FURNISH IRREFUTABLE PROOF THAT THE POSER VEIN EXISTS AS A MATTER OF LAW.

The vital question in this case, as far as the Poser vein is concerned, is whether a geological occurrence possessing the physical characteristics of the Poser vein, particularly as disclosed by the assays, is in contemplation of law a vein, or not. As we have already pointed out, the existence or non-existence of a vein often depends upon mixed questions of fact and law. Appellants' contention on this appeal is that, though the trial court found as a matter of fact that Poser vein west of the Emily in the Poser claim did not exist, nevertheless, the court erred and its error is reviewable on appeal because the mineral showing and physical characteristics of the Poser vein are such that it must, as a matter of law, be considered a vein within the contemplation of the mining statute. The trial court was of the opinion that a question of law was involved, even though it held that it was unnecessary to consider “* * * whether in any case a fissure no better mineralized than plaintiffs' sample assays indicate for 1300 feet, is a ‘continuous vein’ *in legal contemplation* or in fact, affording an apex and extra-lateral rights to great ore bodies below”. (Tr. p. 2246.)

Appellants' contention on this appeal is that the Poser vein is demonstrated by assay and other evidence to be in "legal contemplation" a vein.

Recognizing in advance of the trial that appellee's witnesses would attack the existence of the Poser vein, appellants had practically every exposure of the Poser vein from the surface down to and including the 1300 level, and for the full length of the Poser claim, carefully sampled and assayed. What evidence could be more directly in point and decisive of the issue as to the existence or non-existence of the Poser vein than assays of samples of this vein regularly taken throughout the entire area? Appellee was disputing the very existence of the Poser vein. These assays establish this area occupied by the Poser vein to be as continuously and highly mineralized, and in many cases more so, than other nearby structures which appellants claimed to be well mineralized veins.

After all, neither practical miners nor courts in interpreting the mining laws are interested in veins as mere geological entities. The primary object to be attained is the discovery and exploitation of *mineralized veins* or *ore bodies* in the mass of the mountain, whatever their structure may be. Assays are resorted to in everyday practical mining operations as a legitimate and effective aid to mining. It is only logical that this sort of evidence, which tends to disclose the existence or non-existence of the mineralized area, should be admissible as evidence of the existence of the sought for commercial mineral. And, for the reasons just given, it should afford the very best sort of evidence of the existence or non-existence of that

which is, after all, the main reason for there being a mining law—the vein itself.

The courts do not look doubtfully upon assay evidence. There is nothing either in the decisions or in reason to support such an assertion. Such evidence is presented in practically every mining case where it is material to the issues.

In *Hyman v. Wheeler*, 29 Fed. 347, Judge Hallett, at page 354, approves the determining of the existence and continuance of lode boundaries "by assay and analysis". This language is quoted with approval in *Cheesman v. Shreeve* (p. 795 and above referred to). The same language is adopted by the court in *Beals v. Cone* (Colo.), 62 Pac. 948, 953, citing *Hyman v. Wheeler, and Mining Co. v. Cheesman*, 116 U. S. 529. The trial court had charged the jury that vein boundaries "might be ascertained by tests which would distinguish the rock or other substance carrying precious minerals from the rock enclosing it, which did not". This instruction was criticized in so far as it "authorized the boundaries of a vein to be established by assays alone". (952.) The appellate court, however, held that this charge was correct. In *Healey v. Rupp* (Colo.), 63 Pac. 319, 321, the appellate court reversed the trial court, one of the grounds being the erroneous exclusion by the trial court of the assay of a sample of ore.

In *Book v. Justice Mining Co.*, 58 Fed. 106, Judge Hawley comments on the fact that disinterested practical miners testify regarding assays taken from prospect holes and old cuts, indicating "one single, min-

eralized formation". (p. 122.) In *Specie Payment Gold Mining Co. v. Kirk* (Colo.), 139 Pac. 21, "evidence as to assays" was admitted.

In the "*Star*" case, 265 Fed. 881, this court (9 C. C. A.) refers to "the very numerous assays, a number of which are referred to in the opinion of the court below". (p. 890.) Without assays it would have been a physical impossibility to determine the limits of the lode in that case, because, as this court said, it was a sheared zone "without any fixed walls susceptible of identification". (p. 889.)

The same is true of the many cases which came before this court from the Coeur d'Alene region, involving the great Bunker Hill lode with indefinite boundaries.

Where the character and degree of mineralization is the decisive issue, as it is under the evidence in this case, assays are not only the best evidence, but they are the only evidence that can really determine the issue. When appellants' experts declare that the disputed structure is a mineralized vein, if all appellee has to do is produce an equal number of experts who declare it is only barren unmineralized fault, the evidence is in equipoise and appellants, having the burden of proof, necessarily must fail. However, samples fairly taken and assayed furnish the most direct and certain evidence on the question in dispute. If taken at regular intervals and for the full width of the disputed structure, and compared with samples similarly taken on the admitted veins in the same ground, they are the best possible proof that can be presented to

the court. After all, it is the mineral content in the rock with which we are primarily concerned and if that rock is shown to be definitely and substantially mineralized over a great area of limited thickness and with definite dip and strike "within the general mass of the mountain", it is for all legal purposes a vein or lode.

VEIN DEFINITION.

In *Lindley on Mines* this subject of vein definition receives elaborate treatment (Sects. 286-294), and on pages 650 and 651, Section 290-A, are found Figures 6 and 8 illustrating complex lodes with irregular and indefinite boundary walls. The author concludes this section by stating:

"Suffice it to say, that the mineralization of rock in place is an essential element in the definition; the nature of the material, the form of the deposit, the character of the boundaries are widely variant." (p. 651.)

Judge Field's definition found in *Richmond M. Co. v. Eureka M. Co.*, 4 Sawyer 302, Fed. cases No. 4548, is generally considered a classic definition and is probably the most commonly quoted:

"We are of the opinion therefore that the term as used in the Acts of Congress is applicable to any zone or belt of mineralized rock lying within boundaries clearly separating it from the neighboring rock. It includes, to use the language cited by counsel, all deposits of mineral material found through a mineralized zone or belt coming from the same source, impressed with the same forms, and appearing to have been created by the same processes."

This definition received the approval of the Supreme Court of the United States in *Iron Silver Co. v. Cheesman*, 116 U. S. 529. The court quotes extensively and approvingly from Judge Field's discussion of what constitutes a vein, including the portion where he calls attention to the fact that a fissure and walls are only important to the practical miner,

"as indicating the boundaries within which he may look for and reasonably expect to find the ore he seeks".

He concludes that

"a continuous body of mineralized rock lying within any other well defined boundaries * * * would equally constitute, in his eyes, a lode".

The Supreme Court went on to say

"a body of mineral or mineral-bearing rock, in the general mass of the mountain, so far as it may continue unbroken, and without interruption, may be regarded as a lode, *whatever the boundaries may be*".

Judge Hallett, also one of the most eminent of mining judges, held, in the case of *Hyman v. Wheeler*, 29 Fed. 347, in answer to the contention, "that it was a matter of importance to ascertain whether the ore was separated from the country rock by planes or strata of that rock visible to the eye",

"I see no reason for such distinction. It is true that a lode must have boundaries, but there seems to be no reason for saying that they must be such as can be seen. There may be other means of determining their existence and continuance, as by assay and analysis."

In the case of *Beals v. Cone*, 27 Colo. 473, 62 Pac. 948, the court said that it was not essential that a vein have walls,

"but that the boundaries of the vein might be ascertained by tests which would distinguish the rock or other substance carrying precious minerals from the rock enclosing it which did not * * * It must have boundaries, but it is not necessary that they be seen. Their existence may be determined by assay and analysis". (Citing cases.)

In *Star Mining Co. v. Federal Mining Co.*, 265 Fed. 881, this Circuit Court of Appeals quoted approvingly from the testimony of one of the witnesses, as follows:

"It is not essential, for the formation of a disseminated lode, that there should be any walls, that there should be any shearing. It simply requires a more or less porous rock through which the solutions may pass. * * * They (may) have indefinite boundaries."

It is respectfully submitted that, when the mineral deposit, which appellants assert is the Poser vein, is tested by the foregoing definitions, it will be found to fully comply with all of the elements prescribed by the courts to constitute in contemplation of law a vein.

FAIRNESS AND ACCURACY OF APPELLANTS' SAMPLING AND ASSAYS.

Realizing that assays of the Poser vein, other nearby veins and wall rock conditions would, for purposes of comparison, become a vital factor in the determina-

tion of this case, greater care than usual was taken by appellants that they should furnish a fair and accurate representation of the facts and be placed beyond all suspicion. Samples were taken at regular intervals wherever the conditions in the ground would permit and either entirely across the various workings sampled or, if a vein or special feature were being sampled, for its full width. The testimony of the men who had direct charge of the sampling will substantiate this. (Landram, Tr. pp. 780-795; Cavanaugh, Tr. pp. 807-808.) That this sampling and assaying was done fairly is best evidenced by the fact that appellee did not attempt to dispute its accuracy. It is certain that, if there had been any substantial reason for doubting the correctness of these results, appellee would not have allowed them to stand unchallenged.

These assays of the Poser vein and their comparison with assays of veins, recognized by appellee as strong, well mineralized veins, furnishes corroborative and uncontrovertible proof of the existence of the Poser vein throughout the various drifts and raises just as testified by appellants' witnesses. We cannot urge too strongly the importance of this evidence, which unquestionably supplies the preponderance of probability essential for a determination of the issue as to the existence of the Poser vein.

**COMPARISON OF ASSAYS OF EAST AND WEST END RAISES
ABOVE THE 1000 LEVEL.**

All of appellee's witnesses insisted that that portion of what appellants claim to be their Poser vein within

the Poser claim, east of the Emily vein and above the 1000 level, was the "Pilot" vein. Appellee's witnesses all testified that this was a typical vein and that it was well mineralized. We have, therefore, a standard of comparison for the vein segment which appellants claim to be the Poser vein west of the Emily. It must be kept in mind that appellee claims that the segment east of the Emily is a true vein while the westerly segment, it contends, is nothing but a cross-fractured area for a distance, and beyond that to the west end of the claim is mainly Black Rock fault.

For purposes of comparison we have prepared Diagram No. 15 which appears in the appendix and which is a reduced copy of both appellants' and defendant's cross-section exhibits through the series of raises, at the west end and at the east end, respectively, of the Poser claim. The geology, as interpreted by each, appears thereon side by side for purposes of ready comparison, the raises being duplicated in each instance for this purpose. It will be noted that in the east end raises above the Poser 1000 level appellee has colored the vein exposure blue, indicating the existence of what it claims to be the northwest "Pilot" vein. Appellants have colored this portion red, indicating the claimed existence of its Poser vein. In any event, both sides agree that here we are dealing with a strong, typical vein. Turning to the west end raises, we find that down to the 1000 level and below, appellee has colored the exposure in those raises green, indicating its claim that in these raises, with the exception of some faulted vein segments crossing the raises, nothing is found but Black Rock fault. On

the other hand, appellants have colored this section of raises in red, indicating the claimed existence of the Poser vein.

In making this comparison, we must bear in mind the fact that the testimony established, without material contradiction, both in published monographs written by Mr. Sales, the chief geologist and one of the witnesses for appellee, and also in the detailed testimony of the other witnesses, and as evidenced by the skeleton models themselves, that, with the exception of one or two of the major veins, such as the Rainbow and the Emily, there is comparatively little mineralization found in any of these veins in this particular area above the 1000 and 1200 levels. The skeleton models both indicate that, with the few exceptions noted, there has been no considerable stoping on any of these veins above these levels. We do not, therefore, expect to find any considerable amount of commercial mineralization throughout this upper area. The vein which is admitted to exist in the east end raises down to the 1000 level is no exception to this general rule.

For ease in comparison, appellants introduced as exhibits in the court below colored graphs to illustrate the proportionate amount of mineralization as disclosed by assays of their Poser vein, practically wherever it was exposed throughout the upper workings wherever its existence was disputed. These were Plaintiffs' Exhibits Nos. 60 to 80 inclusive, and were large level and cross-section maps, with these colored graphs represented alongside of the vein exposures in

each case. It would serve no useful purpose to present to the court in this brief the results of all of these assays. A typical situation is shown on Diagram No. 15 (Appendix), where the colored graphs represent the comparative results of the mineralization established by the assays in each the west end and east end raises. The legend on Diagram No. 15 discloses that on these graphs green indicates copper, purple indicates silver, red indicates zinc, and blue indicates lead. The height of the coloring above the base line gives the comparative percentage of the particular mineral at that place, but, since it would have been difficult to keep these graphs within reasonable space where the mineralization ran above five per cent in zinc, lead or copper, or five ounces in the case of silver, the colored graph was arbitrarily terminated when the mineralization reached these percentages. This explains the flat cut-off appearance in certain portions of these graphs where the assays showed mineralization above these percentages and which would otherwise have resulted in excessive heights for the graphs. It will also be noted that each respective graph is placed opposite the respective portion of the working from which the samples were taken and illustrates the mineralization occurring at the places where the assays were taken along these workings. The court will note that raise by raise the disputed Poser vein, which appellee insists is only the Black Rock fault, in the west end line of raises shows higher assay values as indicated by the height of the coloring of the graphs than does the admitted vein found in the east end raises down to the 1000 foot level.

The Poser vein at the west end in 1034-A raise has nearly twice as much copper, eight times as much silver, six times as much zinc, and three times as much lead as the alleged "Pilot" vein at the east end of the claim in 1043-A raise. The Poser vein at the west end, in 747-A raise, has less copper and zinc but more silver and lead than the alleged "Pilot" vein at the east end in 726-A raise; the Poser vein at the west end in 581-A raise has slightly less copper and less lead, but more than twice as much silver and zinc as the "Pilot" vein at the east end in 570-A raise; and the Poser vein in 351-A raise has slightly less copper, silver and zinc, but more lead than the "Pilot" vein in 310-A raise.

Here then we have a comparison, for more than 1000 feet below the surface, of the Poser vein in the west end raises, alleged by appellee to be run on nothing but Black Rock fault, with a vein in the east end raises characterized by appellee's witnesses as a strong, well mineralized northwest vein, and we find the alleged fault to be much better mineralized than the vein. Appellee has only two short segments of alleged drag ore to account for the mineralization in the "fault," and yet the "fault" away from the alleged drag is better mineralized than through the drag area.

All of the assays taken in the west end raises and the east end raises, respectively, have been averaged and these average results are graphically shown on the two small graphs appearing in the lower right-hand corner of Diagram No. 15. (Appendix.) These graphs

illustrate the fact that the copper mineralization is about the same in each set of raises while the west end raises, which appellee insists disclose Black Rock fault mainly, have nearly three times as much silver, more than fifty per cent more zinc, and more than fifty per cent more lead than the east end raises which were run on undisputed vein material. It is impossible to escape the conclusion that, as far as assays and mineral content are concerned, the west end raises above the 1000 level, which appellee claims is nothing but Black Rock fault and a few dragged vein segments, contain much more mineral than the east end raises run on what appellee admits to be a strong, distinctive, well mineralized vein of this region.

WEST END RAISES BELOW THE 1000 LEVEL.

If we take the west end line of raises below the 1000 level, we have another standard of comparison in the 1561-B winze and the 1561A winze, these workings being found immediately between the 1500 and 1800 levels, as also appears on Diagram No. 15. Appellee admits that the 1561-B winze contains a vein, its claimed "North Badger" vein, whereas in the 1561-A winze there is nothing shown on its mapping of this winze but Black Rock fault. There is inserted as Diagram No. 16 (Appendix) Dr. Bateman's interpretation (Dr. Bateman was one of appellee's witnesses) of the situation shown in these two winzes. The red coloring indicates vein material and the blue coloring, principally in the 1561-A winze, indicates Black Rock

fault. In the lower right-hand corner of Diagram No. 16 will be found two colored graphs side by side, indicating the relative amount of mineralization shown by the average assays taken in each of these workings. It will appear from this, and from the assay graphs appearing on Diagram No. 15, that the average mineralization of the alleged "North Badger" vein in 1561-B winze is no better than the average mineralization of any of these workings in this vicinity and that those sections of raises taken as a whole, alleged by appellee to contain the Black Rock fault, all show better mineralization than that of the alleged "North Badger" vein. It is impossible to account for the higher percentage of mineralization appearing in the Black Rock fault area by the comparatively few dragged portions of vein segments that appellee claims also show in some of these workings. An examination of Diagram No. 16 will indicate that according to Dr. Bateman, one of appellee's witnesses, there is practically no drag found in the 1561-A winze.

**COMPARISON OF VEIN SEGMENTS ABOVE 1000 LEVEL
EAST AND WEST OF THE EMILY.**

A more complete comparison between the so-called "Pilot" segment of the Poser vein east of the Emily, admitted to be a vein, and of the Poser vein west of the Emily, claimed by appellee to be only fractured granite and Black Rock fault, can be made by taking the average of all assays throughout these respective areas. That comparison shows the following:

	% Copper	oz. Silver	% Zinc	% Lead
Poser west of Emily	0.20	1.07	1.30	0.35
"Pilot"	0.17	0.87	0.77	0.27

This makes a real comparison between the mineralization of what appellee says is nothing but the Black Rock fault, and what appellee says is the strong, well mineralized "Pilot" vein. It includes *all* the assays in *all* the levels and raises on each "vein", from the 1000 level up. It will be seen that the Poser vein west of the Emily, which appellee contends and which the court found not to be a vein at all, is better mineralized than the admitted vein east of the Emily, containing higher percentages of each of the four minerals assayed. The zinc content of the western segment average is nearly twice that of the admitted vein which constitutes the eastern segment. Zinc is one of the principal commercial minerals of this particular Butte area.

ASSAYS OF THE POSER VEIN ON THE 700 POSER LEVEL.

In Diagram No. 17 (Appendix) we illustrate the workings on the Poser vein on the 700 level, in duplicate, showing at the top of the diagram appellants' position for the Poser vein and assay graphs (taken from Exhibit No. 67) contrasted immediately below with appellee's geology (from Defendant's Exhibit No. 98), together with, and placed at the bottom of the illustration, graphs of the assay exhibits introduced in evidence showing in colored bars the contrasting averages of mineralization in different parts

of the Poser vein on this level. We have here an opportunity to compare the mineralization of the admitted vein east of the Emily (called "Pilot" vein by appellee and designated as "E" on the diagram) with the mineralization of the entire Poser vein west of the Emily, and also with the mineralization of each segment of the Poser vein; where it consists, according to appellee, only of northwest stringers (labeled "C" on the diagram), where it consists only of Black Rock fault (labeled "B" on the diagram), and where it includes a portion of the alleged "North State" vein (labeled "F" on the diagram). The graphs on Diagram No. 17 show the mineralization of the alleged "Pilot" vein (Section "E") to be much weaker than that of the Poser vein west of the Emily (Graph "D"), the "Pilot" containing a little more than half as much copper, slightly more lead, *approximately two-thirds as much zinc, and less than one-half as much silver* as the Poser west of the Emily.

In this computation of the Poser vein average west of the Emily, we must keep in mind that fact that there has not been included the values originally appearing in the stoped area situated between segments "A" and "F". This was commercial ore and if the values were available would have brought up the general average.

To meet any criticism that the assays on the Poser vein west of the Emily include what appellee claims to be the mineralization of the alleged "North State" vein and some small northwest stringers, we have divided the Poser vein west of the Emily into three segments, as indicated on Diagram No. 17. Section

"C" includes the first 230 feet west of the Emily, where appellee claims the mineralization is entirely due to twelve small northwest stringers going through the drifts on the Poser. Section "B" is the next 100 feet westerly, where appellee maps nothing but the Black Rock fault with some little spots of alleged drag. Section "F" is the next 70 feet westerly in 716 drift, which appellee claims is on the "North State" vein. Section "A" is the westerly 120 feet of the Poser, where appellee maps nothing in the drift that was sampled except a small stringer extending a few feet through the sampled portion in 734 drift. The drift between Section "A" and Section "F" could not be sampled because it had been stoped. We also show on this diagram the samples taken in Section "G" which is sixty feet wide, across two displaced segments of what appellee maps as solid Emily vein. Here again we find that the Poser vein, *where appellee says it is nothing but fault*, is better mineralized than the section where appellee claims the mineralization is due to other veins. In Section "C" where appellee maps the numerous northwest stringers alleged to be strands of the Emily, and said to contribute so much to the mineralization of the Poser, there is less copper, approximately one-half as much silver, less than one-fifth as much zinc, and less than one-sixth as much lead as in Section "B" of the Poser, where appellee says there is nothing but Black Rock fault and some drag ore. But comparing this more poorly mineralized section of the Poser ("C") with the alleged "Pilot" vein east of the Emily (Section "E") we find Section "C" to contain twice as

much copper, twice as much silver, just as much zinc and two-thirds as much lead as Section "E". Comparing Section "A", entirely on the Black Rock fault (except for one small stringer a few feet long) with the alleged "Pilot" vein in Section "E", we find the fault contains as much copper, two-thirds as much lead, nearly twice as much zinc and three times as much silver as the "Pilot". Again, comparing Section "F" on what appellee says is the State vein, with Section "B" on what appellee says is only the Black Rock fault, we find the "fault" contains as much copper, almost as much silver, nearly twice as much zinc and three times as much lead as the alleged "North State" vein. Finally, comparing Section "B" on the "fault" with Section "E" on the "Pilot", vein, we find that the "fault" contains more than twice as much copper, more than three times as much silver, more than five times as much zinc, and four times as much lead as the alleged "Pilot" vein. And to sum it all up, we find that each segment of the Poser vein west of the Emily, even the weakest one in Section "C", is better mineralized than the alleged "Pilot" vein.

In the face of this showing, how much credit can be given to the testimony of appellee's witnesses that the Poser is not a mineralized vein but is only barren fault west of the Emily, except where it gets some mineralization from drag ore and intersecting veins? From these assays it stands out beyond dispute that the mineralization of the Poser vein is due to the fact that it is *itself* a vein, and is not in any appreciable

degree due to the mineralization of intersecting veins or drag ore.

**ASSAY AVERAGE OF ENTIRE POSER VEIN ABOVE
1300 LEVEL.**

Most impressive is the general average of the assays of the Poser vein above the 1300 level for the full length of the Poser claim.

The trial court commented on this computation, stating that:

“Averages computed by plaintiffs are as follows: All levels from the 167 to the 1300, both inclusive, silver, 0.71 oz., copper, 0.24%, zinc, 1.15%; all raises from the 1000 level to the surface, silver 1.54 oz., copper, 0.15%, zinc, 1.36%, lead, 0.39%. *They compare favorably with those presented by plaintiffs from various veins.*” (Tr. p. 2241.)

The court concludes, however, that “on the whole, they are not impressive”, and, “can have little weight in the determination whether the Poser is a vein” in the westerly portion of the claim. It must be kept in mind, however, that certain assays of the Poser vein throughout a stoped area on the 700 level were not included for the obvious reason that all of this ore had been mined out. If these assays were available and had been included, they would naturally have tended to raise the general average. In any event, it must be kept in mind that the undisputed testimony showed commercial mineralization was the exception for all veins, rather than the rule, above the 1000 and 1200 levels. When barren portions which exist in all

veins are taken into consideration, we feel certain that this court, which is familiar with the low average assay content of veins in the Coeur d'Alene region and elsewhere, will recognize that the assay averages for this entire sheet of the Poser vein above the 1300 level, and extending from end line to end line of the Poser claim, is a remarkably favorable showing. It is true that the average does not approximate commercial ore, but no one would expect such values at similar elevations in this region. The Rainbow and Emily veins are the outstanding exceptions. Absence of commercial mineralization in these upper levels is the normal condition. The fact that the percentages indicate that in some of this area the vein material does reach values closely approximating commercial ore, and also the fact that the Poser vein west of the Emily has higher average values than the admitted vein segment east of the Emily, justify the conclusion that throughout this area the Poser is a vein in fact and in law.

**MINERALIZATION OF POSER VEIN DISTINGUISHABLE FROM
BLACK ROCK FAULT.**

Appellee contends that, throughout considerable area west of the Emily vein, the Poser vein is nothing but the Black Rock fault. The trial court so found. The trial court gave no weight to evidence which was offered by appellants on rebuttal to overcome this contention made by appellee. The court refused to admit this evidence and error was noted. We have already called attention to the fact that this is one of the

assignments of error upon which this appeal is based. In spite of the fact that, during the presentation of appellants' case below, the court was continually admonishing appellants not to anticipate any defenses which appellee might make, and to confine the testimony to appellants' direct case, nevertheless, after appellee had asserted, through its witnesses in its defense, that the mineralization of the Poser vein was attributable to Black Rock fault material and to the dragged segments of recognized veins which had been intersected by the fault, yet the trial court refused to allow this material evidence to be considered. The evidence was made a part of the record subject to objection, so that it might be used on appeal. (Plaintiffs' Exhibits Nos. 153 and 154.) It consists of assay graphs compiled from careful assays made of the gouge within the walls of the Black Rock fault, as compared with the assays of the Poser vein for the full width through the same area. There are inserted in the appendix, as Diagrams Nos. 18 and 19, reduced copies of these assay graphs which show the results of the assays. Diagram No. 18 illustrates this comparison throughout a series of the west end raises; and the figures representing averages of these values, both for the entire width of the Poser vein, followed by the percentage of mineral value confined to the Black Rock gouge itself, appear on the left-hand side of the diagram opposite each respective raise. On the right-hand side in color appear graphically the same proportions. The heavy coloring at the top of each graph indicates the proportion of mineral found in the gouge as compared with the mineral found in the

entire width of Poser vein, the latter illustrated by the lighter color immediately beneath the heavier color. It will be seen at a glance that the mineral content of the Black Rock gouge itself is inconsequential as compared with the mineralization of the Poser vein outside of the gouge, and, therefore, can account for only a small percentage of the mineral content in the Poser vein. It is quite evident from the mechanics of geology that any ground-up vein material resulting from the intersection of other veins, to which appellee attributes the mineralization of the Poser vein, must necessarily be confined to the gouge within the walls of the Black Rock fissure. Appellee's witnesses have themselves closed the door to the argument that the mineralization could have been brought in through mineral solutions circulating in the Black Rock fault fissure, because appellee's principal witnesses testified that any solutions that circulated in the Black Rock fault fissure were not mineral bearing solutions to the extent of depositing the valuable minerals—zinc, silver, copper and lead. (Sales, Tr. pp. 1145-1148; Wiley, Tr. p. 1798.)

Mineralization in the gouge can and does account for only a small percentage of the mineralization shown by the assays in the Poser vein west of the Emily. One of appellee's witnesses, in describing the main Black Rock fault across the 1300 level (Barker, Tr. pp. 1489-1496), said the fault was represented by one or sometimes two or more gouges, one to two inches wide, with a zone of crushed granite on each side of the single line of gouge, or between gouges where there were two, *and that if the crushed zone*

were sampled four feet wide (appellants' samples on the Poser on this level average over five feet wide and in all the workings on the Poser west of the Emily they average approximately five feet wide) *the proportion of the values in the samples that would be represented by the gouge would be as one and one-half inches is to four feet.* Gouge possesses no power to concentrate the mineralization of the veins through which it passes. It will contain as much, and only as much, mineralization as the structures through which it goes. It will be just a "sample" of the country, containing ground-up fresh granite in the same proportion that the granite bears to the vein material in the path of the fault. It is therefore obvious that the little scattered particles of ground-up minerals in the clay of these narrow gouges could not account for any substantial portion of the mineralization in samples taken five feet across the Poser vein.

This situation is illustrated by Diagram No. 19 in the appendix, excluded by the trial court and given no consideration. That diagram illustrates graphically the situation appearing in the westerly portion of the Poser 1300 level. Appellee's large plan map exhibit of this level (Defendant's Exhibit No. 103) shows Black Rock fault where appellants claim the Poser vein exists. Diagram No. 19 shows that the mineralization of the width of the Poser vein assayed is an enormously greater percentage than that of the Black Rock gouge, which is insignificant in amount by comparison.

There remains only one other explanation suggested by appellee to account for mineralization in the al-

leged Black Rock fault, and that is the statement that the mineralization in the fault comes largely from unnamed and unmapped veinlets, stringers and seams of mineralization that run in all directions through the country. But obviously no such explanation can reasonably be made to account for the fact that this one thousand feet of alleged fault in the west end raises contains substantially *more* mineralization than the one thousand feet of alleged "Pilot" vein at the east end. There is certainly no evidence to support a contention, and no reason supporting a presumption, that there are more of these stringers in the country traversed by the alleged fault than in the country traversed by the alleged "Pilot" vein along which there is also a fault gouge. It follows that the one thousand feet of "Pilot" vein would get as much additional mineralization from such stringers and seams as the one thousand feet of Poser "fault", and the "Pilot" vein should therefore show much *more* mineralization than the Poser "fault". Instead, it shows much *less*.

Appellee is therefore left without any explanation of the superior mineralization in what it claims to be barren fault in the west end raises and levels, as compared with its alleged "Pilot" vein in the east end of the claim. The plain fact is that these sample and assay records of the west and east end raises above the 1000 level completely refute appellee's assertion that the Poser west of the Emily is a fault and not a vein. And the record contains much more evidence on this same subject, that makes the demonstration of the fallacy of this defense certain and complete.

We have already called attention to the fact that appellee contends that the mineralization in the Poser vein is due to Black Rock fault drag. We have already called attention to the fact that this cannot be the case because the walls on both sides of the Black Rock fault gouge carry the values rather than the gouge itself. However, there is the strongest possible evidence to show that the mineralization of the Poser vein is not due to material dragged in by veins intersecting the Black Rock fault. We will take only one typical case, though there are many such occurring in the area in controversy. (We called attention to another instance in connection with the discussion of the assay values on the 700 level.) We are inserting in the appendix as Diagram No. 20 a comparison of the assays in the 1034-A and 1346-A raises. These raises are shown in duplicate with the appellants' and appellee's geology, respectively, appearing thereon. It will be noted that, according to appellee's geology and the testimony of its witnesses, where the "State" vein has been intersected and dragged in the lower portion of the exhibit for the distance designated by the letter "Y", there is considerably less mineral content shown by the assays of this segment "Y" between the faulted ends of the alleged "State" vein, than there is in the upper portion of these raises, indicated in the diagram through the distance designated by the letter "X", where there are no faulted vein segments appearing on appellee's representation of the facts to account for such mineralization. The average assay comparison between the two segments "X" and "Y" is illustrated by the colored graphs appearing in the

lower right hand corner of Diagram No. 20 and shows the segment, without the intersecting veins to account for the presence of mineral value, is far higher in mineral content than the portion where intersecting veins occur. The actual fact is exactly the reverse of what appellee contends should be the case.

APPELLEE'S ATTEMPT TO OVERCOME POSER VEIN ASSAY EVIDENCE.

In its attempt to show that there was mineralization just as extensive as that found in appellants' Poser vein throughout this area, appellee introduced assays taken in the long 1357 crosscut on the 1300 Poser level. (Defendant's Exhibit No. 138.) In making this comparison appellee has selected a crosscut which contains more and better mineralized cross veins than any other crosscut in the entire mine. This crosscut includes all the branches of the Rainbow vein between drifts 1334 and 1350, three large branches of the Emily vein north of the Black Rock fault with their associated stringers and mineralization, and three large faulted branches of the Emily vein south of the Black Rock fault with their associated stringers and mineralization, two branches of the "North State" vein, as well as numerous other small cross veins and stringers. It is true that appellee did not include in its sampling all of these veins that crossed, but it sampled right up into the sides of those veins and sampled all of the cross veins included in the sections used for comparison. In order to prove this, appellants caused to be sampled 308 feet of crosscut 1345,

which demonstrated that there were many times the metal values in this long 1357 crosscut selected by appellee than in the crosscut 1345 which more nearly represents the average mineralization throughout this territory. A comparison, however, of this sampling in crosscut 1357 and the graphs introduced by appellee will indicate that the mineralization, even in this highly mineralized crosscut selected by appellee, does not approach the mineralization of the Poser vein. The Poser vein at this elevation contains approximately ten times as much copper, three times as much silver, and four times as much zinc, as even this highly mineralized crosscut. This evidence of appellee's own making has established the fact that you cannot crosscut this country anywhere, even where the greatest number of veins occur, and get nearly as much mineralization as is found in the Poser vein. In fact, the total mineralization of the Poser vein is six times greater than that obtained from this highly mineralized crosscut.

CONCLUSION AS TO ASSAY EVIDENCE.

The assay evidence was not introduced to prove vein structure, but to meet the only defense open to appellee in this case. If appellee had admitted the existence of the Poser as a vein, it would have admitted itself out of court. The facts did not permit a serious denial of the *continuity* of the structure which plaintiffs are claiming as the Poser vein, and appellee made no real attempt to dispute such continuity. Appellee, therefore, seized upon the only other defense available,

which arose from the accidental circumstance that the Black Rock fault had followed the Poser vein for a long distance. This gave appellee a chance to make the contention that the Poser vein, throughout most of its extent, was nothing but the barren Black Rock fault.

Appellee's witnesses declared that the structure of the Poser, where appellants' witnesses identified it as a fissure vein, the vein filling being sulphides and mineralized granite, was nothing but the Black Rock fault, the sulphides being drag and fragments of other veins and the mineralized granite being nothing but barren granite crushed by the fault and altered only by solutions entirely post mineral. (Sales Tr. pp. 1144-1147; 1153-1162.) Where appellants identified the Poser as a shear zone, marked by transverse fissures produced by the shearing and by a wide zone of crushed and mineralized granite between the transverse fissures, appellee's witnesses said the shear zone was nothing but an area of northwest stringers associated with northwest veins, with a little altered but not mineralized granite between them.

With the issue as to the character of the Poser thus sharply defined, what evidence could be more directly in point and decisive of the issue than assays of samples regularly taken throughout the entire disputed workings, showing that the Poser structure, which appellee declared was only unmineralized fault, with isolated pieces of drag and sections of northwest veins, was as continuously and highly mineralized as other nearby structures which appellee declared to be

well mineralized veins? Certainly such evidence is much more persuasive on this vital and decisive issue than the unsupported assertions of a group of expert witnesses, based only on ocular inspection, that the structure in dispute is nothing but barren fault.

We believe the evidence of the assays is controlling in the controversy as to the character of the Poser vein. It destroys appellee's claim that the Poser is in the main nothing but the Black Rock fault. It strongly corroborates the testimony of appellants' witnesses as to the structure and continuity of the Poser vein, and demonstrates that it *is*, in law as well as in fact, a vein, as substantially mineralized as other undoubted veins in this ground.

We conclude our presentation of the assay evidence with the confident assertion that this evidence conclusively shows that the Poser, throughout the workings west of the Emily, is a vein and not merely a fault. It fully corroborates the opinion of appellants' witnesses to that effect and completely refutes the opinion evidence of appellee's witnesses, based on mere inspection of the vein, that the Poser is only a fault. These assays do not depend upon opinion or prejudice. They are a scientific and exact determination of a fact, and they prove beyond question that the Poser has the character and extent of mineralization that appellee's witnesses themselves have testified would make it a vein.

AGE, CHARACTERISTICS AND GENERAL RELATIONSHIP OF
POSER TO EARLIER VEINS.

Appellants' witnesses describe the Poser vein as of Steward age. They say that, in the later part of the period of mineralization, when the East-West and Northwest veins were nearly finished veins, this Steward vein was formed by a shearing stress which broke and crushed the rocks along a zone of generally northeast-southwest strike, but without great movement of one wall in relation to the other. (Mead. Tr. pp. 546-547, 553, 559, 628; Lawson, Tr. pp. 848-849.)

This shearing stress expressed itself generally in a rather clearcut fissure of the common type, with definite walls, but in the central portion of the 700, 1000 and 1300 levels it developed a zone of small transverse fissures, extending diagonally across the course of the vein, and forming a definite zone of altered and mineralized granite in the general plane of the vein. This zone of transverse fissuring is not unique among mineral bearing veins. It has many prototypes. (Mead, Tr. p. 562; Lawson, Tr. pp. 849-850.) The production of such transverse fissures by shearing stress is capable of experimental demonstration, and such demonstrations have been made in the course of ordinary geological research work. (Mead Tr. pp. 548-552; Plaintiffs' Exhibits Nos. 45-50.) This zone is confined to a limited portion of the vein, and merges insensibly into the ordinary fissure type of structure without any break or line of separation. (Mead Tr. pp. 546, 692, 697, 698; Lawson Tr. pp. 852-853.) While there is no definite gouge or other line

of division to mark the walls of the vein through this zone of transverse fissuring, the vein is nevertheless a definite structure through this zone, with a strike and dip conforming with the general course of the vein. Anyone familiar with the appearance of the ordinary type of altered and mineralized granite, which forms so large a part of the vein matter in all of the veins of this district, would have no difficulty whatever in recognizing this portion of the vein underground and in telling when he was within the vein and when he had left the vein and was in fresh granite. (Burch Tr. pp. 149-150; 258-259; Mead Tr. pp. 553, 556-557, 620-621; Lawson Tr. p. 848.) The general character of this portion of the Poser vein and the mechanics of its formation are illustrated by appellants' exhibit (Plaintiffs' Exhibit No. 44), a copy of which will be found inserted in the appendix as Diagram No. 21.

The Poser fissure, as it came up from below where the stresses originated, encountered many East-West and Northwest veins or fissures already formed or in process of completion. Where these veins or fissures were parallel to and coincident with the Poser plane of fracturing, the Poser followed them for a distance, reopened them, and added to their mineralization. (Burch Tr. pp. 184, 190; Mead Tr. p. 649; Lawson Tr. pp. 854-856; Sales Tr. pp. 1208-1210.) This phenomenon, the tendency of a later fissure to follow an earlier one as a line of weakness, is well illustrated by the Black Rock fault, which followed the Rainbow for a long distance, and then broke over from the Rain-

bow just east of the Poser claim and followed the more recent plane of weakness presented by the Poser vein to the west. These preexisting veins, followed for a distance by the Poser, as in the case of some of the East-West veins it encountered, or crossed by the Poser, as in the case of the Northwest veins, were, to use the language of Mr. Sales,

“crackled and reopened, and supplied important new channels connecting the widely separated ore channels in the later vein, in which case the enriching influence upon the old vein filling might be very great.” (Sales Tr. pp. 1208-1209.)

The inescapable evidence presented by the models and maps in this case shows that here this enriching influence of the later vein upon the older veins was very great indeed.

On level after level, great stopes on the older veins may be seen coming down to the Poser vein and ending there. On the models, these stopes rise directly out of the Poser vein. With the single exception of the Emily vein in the east, appellee found no commercial ore under the Poser vein. And that was not because the older veins themselves ended at the line of the Poser. The witnesses for both appellants and appellee agree that these northwest striking veins, which approach the Poser from the south, continue to the north beyond the Poser and many of them have been exposed in the workings there. But uniformly they are poorly mineralized north of the Poser, and their commercial ore ends either directly against the Poser or so close to it as to show clearly the Poser influence.

In this connection it must be remembered that the mineralizing solutions came up from below, and that, where the older fissures were reopened along the plane of the Poser fissure, they formed "leaks in the pipe line", as described by appellants' witnesses (Mead Tr. p. 534; Lawson Tr. pp. 854-856), and the ascending solutions, departing from the Poser fissure into the older fissures above the plane of intersection, added enough mineralization to that already existing there to make them commercial veins. There present leaness *under* the Poser clearly shows the effect of the Poser as a mineralizing source.

Appellee's witnesses, denying the existence of the Poser vein, say that these ore bodies of the older veins end against the Black Rock fault. The trial court falls into this same error when it states repeatedly that the Black Rock fault is "in the nature of a footwall for the ore bodies." (Tr. pp. 2242, and again p. 2243.) But clearly that is a mere coincidence due to the fact that the Black Rock fault follows the Poser fissure. All the witnesses agree that the Black Rock is post-mineral. The Black Rock fault was not there when these ore bodies were formed and, therefore, could have had no influence or effect upon their formation or their location in the ground. It is evident that the ore bodies end against the Black Rock fault only because that fault followed the Poser vein in these lower levels of the mine, and it was the Poser fissure that provided the channel through which the final mineralizing solutions found their way into the older veins. Except for this leaking away of a con-

siderable part of its mineralizing solutions, the Poser might have provided an exception to the general rule that the Steward veins are lean in the upper areas near the surface.

THE TRIAL COURT'S OPINION.

It is only natural that a losing litigant should find itself in decided disagreement with an adverse decision. It is seldom, however, that a court's opinion, even though adverse, is justly subject to criticism because of its illogical inconsistencies and its evidence of manifest prejudice. We cannot refrain from commenting on portions of the trial court's opinion in this case because it repeatedly gives expression to such extreme partisanship that can hardly be said "to savor of judicial poise."

At the outset, the court finds that the North State, State, North Badger and Badger veins apex in defendant's claims (Tr. p. 2234) in spite of the fact that hundreds of feet of unexplored and undeveloped territory intervenes between the highest stopes where these veins have been mined in defendant's workings, and the claimed surface exposures which the court finds to be the apices of these veins. A glance at either of the large skeleton models, or at appellee's own cross-section maps (Exhibits Nos. 119 to 124 inclusive), will substantiate this fact and indicate that the court has necessarily accepted these unconscionable projections necessarily with reversed dip, in order to find that the apices of the veins embracing the ore

bodies in dispute are within appellee's mining claims at the surface. The same criticism applies to segments of "North State" vein which are claimed by appellee to exist in Poser subsurface territory and to account for mineralization and even stoping, which appellants claim to be a part of their Poser vein. Appellee's long projections of its "North State" and "State" veins to such positions are wholly unwarranted.

THE TRIAL COURT'S DECISION AS TO THE POSER VEIN.

The trial court is of the opinion that the testimony of the experts on both sides "demonstrates that the Poser vein is intersected by veins of East-West and Northwest ages", and that, the conclusions of appellants' experts to the contrary, "are not only valueless, but also are reckless evasions". This is also unwarranted criticism, in view of the fact that the court bases it largely upon the fact that these witnesses testified that the Poser vein was a very narrow seam, or crack, or wall, with only a small amount of gouge where it cut through the Emily vein. The court concludes that, "intersection affords an *infallible* test of age, and the Poser vein failed when subjected to it". (Trial Court's Decision, Tr. pp. 2237-2238.) The court then concludes that it is unnecessary to consider other evidence.

This conclusion of the trial court, couched in such manifestly partisan language, loses all weight when tested in the light of this same trial court's former opinion in the "*Elm Orlu*" case, and also in the light

of the testimony of appellee's own expert, Steele, who, because of repeated visits to the ground in question had every opportunity to observe conditions there existing.

In the "*Elm Orlu*" case (*Clark-Montana Co. v. Butte & Superior Co.*, 233 Fed. 547, affirmed on appeal, 248 Fed. 609, 249 U. S. 12), involving territory immediately adjacent to that here involved, it will be recalled that the main issue was whether the Jersey Blue vein crossed or united with the Rainbow. In spite of months of mine development calculated to expose this situation, the trial court was uncertain as to whether a crossing had been proven or not, and held that the evidence on this point was "in equipoise". The court also said:

"Healing and cementation may destroy evidence of crossing in many places. Where the 'Blue' fractures crossed the well mineralized east-west veins, *in most places there was nothing to replace and the fractures healed*. Only where there was yet unreplaced granite would there be much evidence of cross vein structure." (570.)

and later added:

"It is admitted 'Blue' veins cross obscurely
* * *."

And again, if we refer to the testimony in this case of Mr. Steele, one of appellee's witnesses who for ten years has been directing appellee's mining of the ore bodies in dispute, we find, in describing the intersection of the older East-West veins by the Northwest or Blue veins, which is the same situation as was involved in the "*Elm Orlu*" case, he states that at cer-

tain points of intersection the northwester or later vein is only represented by a "clay seam". He adds, "In some places the northwester is just a single clay seam", and without mineralization. (Tr. pp. 1645-1646.) And the same witness when asked whether he knew of a *single instance* where the mineralization along a northwester actually cut across the mineralization of what appellants claimed to be their Poser vein in these lower workings, *could not remember one*. In each instance it was only a clay seam or gouge slip unaccompanied by mineralization which he found crossing the Poser and also the older vein structure, which is the identical situation admitted by appellee's witnesses to exist at points where the Poser vein is claimed by appellants' witnesses to cross the Emily vein on the 500 and 700 levels.

Bearing in mind the fact that this same trial court in the "*Elm Orlu*" case held that the crossing of veins of earlier age by veins of later age was obscure, with the evidence of crossing destroyed in many places by "cementation and healing", and also bearing in mind that appellee's own expert, presumably thoroughly familiar with the situation of the crossing of the earlier veins by later veins, testified that in many places this crossing was only evident by a gouge seam, there would hardly appear to be any justification for these unfair strictures of the trial court and any reasonable basis for his detailed criticism of the testimony, found in the opinion. (Tr. pp. 2237-2238.)

The court also comments on the fact that on appellants' map, where the Poser vein is represented as crossing the Emily in the vicinity of the 1337 cross-

cut, "the red colored Poser vein has been superimposed on the yellow colored Emily "vein". (Tr. p. 2238.) The court's inference that anything prejudicial to appellants' case can be based upon this error in coloring is totally unwarranted. The error was due entirely to the erroneous assumption of the draftsman who had no first-hand geological information, and the red coloring was in no sense an afterthought, as the court would seem to infer, but a correction made by the geologists when they noted the error in coloring in the first instance.

In stating that, "intersection affords an infallible test of age", (Tr. p. 2238) the trial court utterly ignored the fact that not only did appellants' witnesses testify that later movement along an older vein already formed, which is a common occurrence, might produce the very opposite appearance, namely, apparent intersection of a later vein by an older one, but this obvious and recognized geological fact was corroborated by appellee's chief geologist, Mr. Sales, who testified as follows:

"Q. You did find much evidence and have found much evidence of continued movement, we will say along the first series of strike fissures, the Blue veins during the period and after the period of ore formation, haven't you?

A. There is some evidence there.

Q. And in such case with a strike fault along the Blue vein you might well have at the point of intersection with the Steward vein the appearance of cutting (1276-1154) a later vein by an earlier vein, might you not?

A. I think I have seen that in very rare instances in this district." (Sales 1220.)

As will be pointed out more at length hereinafter in discussing that portion of the decision bearing on the Intermediate vein, the trial court is strikingly inconsistent, ignoring, not only his statement in connection with his discussion of the Poser vein that "intersection affords an infallible test of age", but also apparently repudiating his announcement of a similar principle in the "*Elm Orlu*" case.

The importance of taking note of this sweeping assertion of the trial court's erroneous conclusion as to the infallibility of intersection as a test of age relationship of veins, is emphasized by the fact that the Poser vein was held to have "failed when subjected to it", and as a consequence, that it was "unnecessary to consider other evidence".

Equally erroneous is the court's assumption that the Poser vein west of the Emily was a "structure without dip, strike, or definite walls". On the contrary, all of appellants' exhibits (see the 700, 1000, and 1300 level maps, Plaintiffs' Exhibits Nos. 12, 14 and 15, and its 2000 co-ordinate cross-section, Exhibit No. 79) indicate that this portion of the Poser vein had a definite strike and dip and that, while its walls were more or less indefinite, they are readily ascertainable and can be determined by observation and assay within comparatively narrow limits. If the court's criticism is well founded as to this area, it would be equally true of the great veins with indefinite walls of the Coeur d'Alene region, where we have these characteristic veins without definite boundaries but, nevertheless, as a whole they have a distinct dip and strike. We find this mineralized zone occurrence in

the Poser vein on each of the 700, 1000 and 1300 Poser levels occupying the same general relation to the rest of the vein on each level and dipping across the Poser south side line.

The court likens this mineralized area to the stock work of the "*Elm Orlu*" case, which is in no sense a parallel situation because in the "*Elm Orlu*" case there was involved a comparatively limited area existing between and near the intersection of the Rainbow and Jersey Blue veins. The court held in that case that the stock work had "neither strike nor limits", and that it answered "no definition of a vein". In this case the deposit has both definite strike and dip and limits definitely ascertainable by assay and even by ocular observation. In that respect it meets all of the requirements as far as vein identification is concerned.

The court criticizes appellants' assays stating that "on the whole, they are not impressive and can have little weight in the determination whether the Poser is a vein", and, *while admitting that these assays compare favorably with assays from various admitted veins*, makes a point of the fact that "these assays are very irregular, abruptly ascending from lowest to highest, and as abruptly descending", utterly ignoring the fact that this is true of recognized veins with very few exceptions. It is a common occurrence and the situation would be noteworthy if the assay results were uniform. In the *Sixteen to One Mine Co. v. Twenty-One Cases* that came before this court, 260 Fed. 724, 265 Fed. 649, 254 Fed. 630, the evidence showed that the values would run many thousands of dollars per

ton and within the next few inches the quartz would become practically barren, assaying only a few cents per ton. Such criticism betrays an ignorance of what is characteristic of most veins, where irregularity of occurrence of values is the rule rather than the exception. In *Consolidated Wyoming Gold Min. Co. v. Champion Min. Co.*, 63 Fed. 540, 544, the court said:

"But true fissure veins and lodes often exist and are continuous without having any filling in certain points or places of mineral matter. A majority of such lodes have, in addition to the clean fissure filling of mineral, a considerable amount of decomposed wall rock, clay, etc. * * * Between these walls will be found bodies of quartz, rich or poor, but there is also liable to be found in many places short or long distances between the quartz bodies or pay chutes where no quartz will be found in the fissure between the walls."

And in *Meydenbauer v. Stevens*, 78 Fed. 787, 791, the court said:

"It is not necessary, however, that the minerals or valuable deposits shall be evenly distributed throughout the zone or belt. It may carry pay streaks near either side or in the center of the lode. In places the zone may be nearly barren of mineral, and in others disclose pockets immensely rich in the precious metals. Areas of the lode may carry ore of a very low grade, while others contain bands or shoots heavily impregnated with mineral. It is sufficient if the zone or belt, as a whole, bears any of the valuable deposits mentioned in the statute."

Equally unjust and baseless is the trial court's criticism (Tr. p. 2242) of what it designates as "novel strategy", on the part of appellants, who, instead of

following the Poser vein down on ore into appellee's workings below, secured the permission of appellee to raise upward from these lower workings and ore bodies in appellee's ground in order to trace the connections to the surface to ascertain whether they aped within the Poser claim. This criticism affords additional proof of the court's unwarranted prejudice, because appellants, in developing their vein as they did, followed the most approved mining methods. They felt convinced from the vein exposures found in the various claims, that they would be able to make the connections which eventually were made and which would establish the identity and continuity of the vein in question. To raise wherever feasible instead of sinking is the most approved and ordinary mining practice. The cost of this work was thereby greatly minimized and the connections could be made much more expeditiously in this manner. In view of appellee's consent to allow this work to be done in this manner, it is difficult to assign any adequate reason for the court's gratuitous criticism of the manner in which the work was performed, unless it be an unwarranted prejudice. It would have been a foolish and costly procedure for appellants to have attempted to sink for hundreds of feet where appellee had consented to the carrying on of this work in the most approved and economical way. It would have cost double the amount and taken twice the time.

Equally unjustified is the court's statement (Tr. p. 2244) that appellants offer no explanation as to how the East-West veins—the State and North Badger—

"were transformed to the Poser vein of Steward age." Appellee's main witness, Mr. Sales, in his monograph on the Butte veins, written long before this controversy arose, stated that these earlier veins were reopened and strike-faulted by veins of the Steward system and in certain instances "enormously enriched" by these later veins. (Tr. pp. 1208-1209.) Such reopening and subsequent enrichment necessarily made it humanly impossible to differentiate between the later and earlier mineralization. For all legal purposes the deposit is a unit because its mineral content has become indistinguishable and inseparable.

The court comments unfavorably upon the fact that the Poser vein does not appear to be faulted by the Black Rock fault, which the court states has a "normal throw of 160 feet". This is fully explained by the fact that the Black Rock fault occupies the position of a strike fault in the area occupied by a large part of the Poser vein exactly as it is a strike fault along the Rainbow vein further to the northeast. It is self-evident that the movement along a strike fault, slicing a vein into parallel sheets or planes, will, in most instances, be unrecognizable and there will be no apparent throw in the vein itself which can be identified. It is only when a fault intersects a vein at an angle that there will be a throw which can be identified and measured.

THE TRIAL COURT'S DECISION AS TO THE
INTERMEDIATE VEIN.

We have already treated at length in this brief the intimation by the trial court that appellants' asserted right to the ore body claimed to be a part of the Intermediate vein should be denied because the angle formed by the strike of the easterly end of the ore body with the Poser east end line plane is less than 45° and it is unnecessary to add anything to the overwhelming line of authority to the contrary.

Commenting on the departure of a strand of the Intermediate vein at the 1583 cross-cut, the court says, "the Intermediate vein reduced in size, *in larger part if not all*, departs northeasterly from 1550 drift." We have already commented on and quoted at length from Mr. Wiley's testimony in an earlier portion of this brief, indicating that one of appellee's witnesses, at least, believed that a part of the Intermediate vein was followed around through the 1588 working appearing on Diagram No. 12 (Appendix), to a junction with the other, or more southerly strand, which had been followed through the 1550 drift to the top of the 1736-A raise. If one of appellee's witnesses will admit this to be the fact, it is no wonder that the court is doubtful if all of the Intermediate vein departs northeasterly.

We have already commented on the fact that the court finds the "View" vein to join the Emily because one strand only of the "View" vein follows alongside a strand of the Emily for some 15 or 20 feet, entirely to the east of and without the vertical

boundaries of the Poser claim; and yet, when this same "View" vein is found coincident with and co-extensive with the Intermediate vein, as all of appellee's witnesses testified was the fact, for fully 700 feet on the dip and several hundred feet on the strike, so that not one of these witnesses could pick out and differentiate "View" vein mineralization from Intermediate vein mineralization, and all this within Poser claim boundaries, the court is not influenced by the fact that the two veins have become merged for practical as well as for legal purposes.

A most striking example of the trial court's inconsistency in deciding that the "View" and Emily veins are joined and are of the same age because of this claim of union, where these two strands run alongside of each other for a few feet in the eastern end of the 1550 drift, becomes evident if we examine the same court's previous ruling and pronouncement in the case of *Clark Montana Co. v. Butte and Superior Co.*, 233 Fed. 547, 570, as follows:

"it is obvious and also admitted that if the veins cross at any one point they must cross at all points, even though so obscurely as to be undiscoverable. But this is not so of union. Every appearance of union and merger may exist at many places, but if one point of crossing is proven, all evidence of union avails nothing and the veins are proven to cross throughout. Healing and cementation may destroy evidence of crossing in many places."

This language is directly applicable to the situation here presented and the trial court utterly ignored the uncontradicted fact that a clean, sharp cut-off of what

appellee claims to be the "View" vein by the Emily vein is shown in the easterly end of the 1338 drift underneath Poser surface. All of appellants' witnesses testified in their direct case that the Intermediate vein extending easterly in the 1338 drift was sharply cut off by the Emily. (Burch Tr. pp. 152, 156; Roddewig Tr. pp. 313, 496-499; Mead Tr. p. 543; Simkins Tr. p. 706; Lawson Tr. pp. 840, 915-916, 924-925.)

In the cross-examination of appellants' witnesses (Roddewig Tr. pp. 495-499; Lawson Tr. pp. 915-916, 924-926) it was very evident that counsel for appellee was trying to get appellants' witnesses to admit that there was a separation of what appellee claims to be its "View" vein from the Intermediate vein, which they contended were found coincident and coextensive throughout this drift. At the easterly end of this drift an intersection and cutting off of the vein structure in the drift by the Emily takes place. Appellee tried to show that before this cutting off, crossing and intersection took place, its "View" vein had departed southerly out of the drift. Because if the "View" vein were shown to be cut off by the Emily, it would not be of the same age. This is evident from the testimony of appellee's own witnesses. Dr. Bateman was asked if certain mineralization in the 1338 drift, before it reached the Emily, did not turn out of the south side of the drift and become parallel with the strike of the Emily vein, presenting a similar situation to the claimed union down on the 1550 drift, to which assumed conditions he assented. (Bateman Tr. pp. 1341-1342.) Mr. Barker was even more positive be-

cause he testified that he saw this mineralization going out to the south and "joining with the north streak parallel with the Emily." (Barker Tr. pp. 1445-1446.)

Mr. Steele, also for appellee, testified to the same situation. (Steele Tr. pp. 1601-1602.)

It is very obvious that counsel for appellee was endeavoring to bring out in the testimony just noted, that the "View" vein, extending along the 1338 drift side by side with the Intermediate vein, turned out to the southeast at the end of the drift just before it encountered the Emily vein, that this departing vein structure paralleled the northwest-southeast strike of the Emily and joined with the Emily, just exactly as they contended a similar condition existed down on the 1500 foot level in the 1550 drift to the east of the 1583 crosscut, where they insist the Intermediate vein departs from the "View" vein and the latter vein continues on to the east and joins the Emily.

Unfortunately for appellee's theory, appellants carried on certain work during the progress of the trial at the easterly end of this 1338 drift just short of where the Intermediate vein was cut off by the Emily. This new work is illustrated on the diagram inserted in the appendix as No. 22, being a composite of a portion of Plaintiffs' Exhibit No. 16, with the new work added and indicated thereon.

The new work consists of the 13014 and 13016 drifts following along strands of the Emily to the southeast and the 13023 crosscut extending to the southwest. This new work absolutely destroys at this point every

vestige of the theory advanced by appellee, because it demonstrates, particularly the 13023 crosscut extended to the southwest, that there is no possible turning out to the southeast of any strands of any "View" vein nor any possible junction of any such strands with the Emily as appellee had insisted was the case. Every bit of vein structure appearing in the 1338 drift is sharply and squarely cut off by the first strand of the Emily encountered in the end of the drift.

Appellants' witnesses in rebuttal testified as follows in regard to these new exposures:

Dr. Lawson stated that the new work to the southeast along the Emily exposed so

"one can see very positively and sharply and clearly the abutment of the Intermediate vein upon the gouge of the Emily. The cut-off is very marked, and there is no indication of any other relationship than that of faulting of the Intermediate vein by the Emily." (Lawson Tr. p. 1875.)

Referring to the crosscut driven southwest, he states:

"That crosscut goes to the south into unaltered, fairly fresh gray granite, with no indication of any slips or gouges going through it, up to the time I saw it * * *. I find no indication of any of these departures from the Intermediate vein going off in a southeasterly direction." (Lawson Tr. pp. 1875-1876.)

On cross-examination he re-states that the crosscut

"did not disclose any southeast striking branches or fissures coming off from the 1338 work * * *." (Lawson Tr. p. 1909.)

Mr. Simkins testified that the crossecut driven to the southwest exposed "gray granite, hard gray granite," and that he saw in the main drift,

"the plain bending of the quartz of the Intermediate vein where it follows along to the northeast and is clearly cut off by the gouge of the Emily or strand of the Emily." (Simkins Tr. p. 1925.)

He was of the opinion that the crossecut was extended far enough to disclose any possible southeasterly strands departing from the Intermediate vein and that he did not see any. (Simkins Tr. p. 1925.)

Mr. Burch made the same observation, excepting that about ten or fifteen feet in the new southwesterly crossecut, which he said contained nothing but fresh granite, he saw one little tight northeast seam. In his opinion the new work showed that there was no branch of the Intermediate departing from the south side of the 1338 drift that did not swing around and come back into the drift against the gouge paralleling the Emily vein.

"It shows also that *all structures* belonging to the Intermediate *are distinctly cut off* by the sympathetic gouge nearly parallel to the Emily." (Burch Tr. p. 1964.)

Dr. Mead made the same observations. He finds nothing but fresh granite in the crossecut with the exception of the little northeast striking slip. (Mead Tr. p. 2010.)

Mr. Roddewig found nothing in this crossecut but fresh granite with the exception of the northeast stringer, a small feature "approximately an inch

wide". The work had sufficiently opened the ground so that

"these veins shown in 1338 can be distinctly seen turning toward the northeast and *cut off* by the gouge," referring to the Emily gouge. (Rodde-wig Tr. p. 2049.)

This is all of the testimony on this new work. Not one of appellee's witnesses referred to it in appellee's sur-rebuttal. Evidently it had convinced them that their theory, originally advanced, that the "View" vein turned out from the 1338 drift to the southeast and joined with the Emily, just as they still claim is the parallel situation on the 1500 level below, was no longer tenable. The absolute silence of their witnesses on sur-rebuttal, as to the conditions disclosed by the new work, is conclusive of what in their own opinion this new work demonstrated. It left their "View" vein, which had been definitely testified to by most of their witnesses as extending throughout the 1338 drift in conjunction with the Intermediate, still continuing on easterly in this drift to the point where all structures are absolutely and squarely cut off by the Emily gouge, as testified to by appellants' witnesses, there being no longer any possibility of any of them turning out to the southeast and joining with the Emily as appellee's witnesses had intimated was the case prior to the running of the new work.

This situation seemed very important to counsel for appellee in the early stages of the trial and the emphasis which they placed upon it at that time is only brought out the more forcibly by contrast with the manner in which this particular situation was ut-

terly ignored by them after the new work had been performed. One of the vital and fundamental points in appellee's alleged "View" vein theory was thereby demolished.

In spite of this absolute and uncontradicted demonstration of a clean cut-off and crossing of the alleged "View" vein by the Emily and the trial court's previous holding in the "*Elm Orlu*" case that "if one point of crossing is proven, all evidence of union avails nothing and the veins are proven to cross throughout", the holding by the same court in this case is absolutely the reverse. Evidently the principles which the court announced and which controlled in the "*Elm Orlu*" case, involving territory lying immediately contiguous and to the east of the Poser claim, do not control in this case. That the court rested its determination of this phase of the case entirely upon his conclusion as to the alleged union of the Emily vein strand with the alleged "View" vein strand, is evidenced by the fact that he concludes his decision with the statement that because of this finding of union "other workings and phenomena require no comment or consideration".

Then, without awarding appellants what appellee conceded belonged to them, the court rendered its decree for and awarded costs to, appellee.

CONCLUSION.

In conclusion we respectfully submit that the decision of the court below should be reserved in the following respects:

(A) As to the Intermediate—"View" Vein:

1. By express admission of counsel and also by the unavoidable logic of the facts found by the trial court, "appellants are entitled to all ore and minerals in the 'View' vein between the plane of (the Poser) west end line and a parallel plane drawn down through the point where the Emily vein crosses the south side line of the Poser" in so far as the apex of the "View" vein is found in Poser ground between these planes. The trial court found that the "View" vein was a branch of the Emily vein and that the Emily apex controlled the right to the "View" vein. It also found that the Emily apex entered the Poser claim at a point on the Poser south side line 370 feet distant from the Poser southeast corner and that this apex departed from the claim at a point on the Poser north side line 50 feet east of the northwest corner of the claim. Therefore, it is conceded and inevitable that appellants are entitled to an extralateral right on the "View" vein measured between vertical planes passed through these above-described points parallel to the Poser end lines and extended indefinitely southerly. The decree should be modified accordingly.

2. The "Pilot" vein in Poser ground was claimed by appellee to be a branch of the Emily

vein. Appellants contended that it was a segment of the "Poser". The trial court found for appellee on this phase of the case though erroneously assumed that no ore bodies below were covered by this segment of "Pilot" apex existing in Poser ground and *made no findings whatever* on appellants' asserted claim of continuity and identity between this segment of apex and the ore bodies in controversy below covered by this length of apex, thus indicating a lack of familiarity with these issues. Conceding, as appellee contends, that the "Pilot" is a branch of the Emily, then the "Pilot" apex in the senior Poser claim controls the ownership of the ore bodies in dispute in the "View" vein, also a branch of the Emily. The decision below should be reversed in this respect and decree ordered in favor of appellants for this extralateral segment of the "View" vein clear out to the Poser east end line plane.

3. The interposition of the Black Rock fault with a minimum throw or displacement measured along the dip of the "View"—Emily combined vein of 200 feet creates a sub-fault apex in Poser ground for the entire length of the Poser claim and an extralateral right on the "View" vein should be awarded accordingly to appellants and the decree below modified in this respect.

4. The coextensive contact and coincidence of the "View" and Intermediate veins throughout the hundreds of feet of dip and strike wherever the latter is exposed in any of the workings, by

the express admissions of appellee's witnesses and the showing of its own map exhibits, and throughout which entire area of absolute contact and coincidence not one of appellee's witnesses can point to any mineralization of the combined and contiguous structure as belonging to the one alleged structure or the other, furnishes absolute and uncontrovertible proof that the two structures have become merged and mingled beyond all possibility of human identification and separation for legal purposes. In contemplation of the law they must be considered as a single joined and merged vein. Consequently the apex of the Intermediate vein will control the situation and the extralateral right on the "View" branch of the Intermediate vein. The apex of the Intermediate vein is the apex of the Rainbow vein extending admittedly from end line to end line of the Poser claim.

(B) As to the Poser Vein:

1. The uncontroverted proof of a tabular sheet of mineralization existing within the mass of the mountain as demonstrated by the assays establishes the existence of the Poser vein throughout the area in controversy. This mineralization was shown to be much more intensive and greater in percentage than the mineralization of adjacent veins and portions of the Poser vein expressly admitted to be strong vein structure. Appellee's chief geologist, long prior to this litigation, had described this very "Poser" vein as of Steward

age occurring in the Badger mine working of appellee and had also described the Steward veins as reopening and strikefaulting the earlier East-West veins which latter they "enormously enriched". Such proof and statements unquestionably establish the Poser to be a vein in contemplation of the law and to control the ownership of the ore bodies in dispute.

2. The assays and graphs depicting these assays, which demonstrated that the mineral content of Black Rock fault gouge could only account for a very small fraction of Poser vein mineralization, should not have been excluded by the trial court. This evidence demonstrated one of appellee's main defenses, viz., that the Poser vein was nothing but Black Rock fault, to be contrary to fact. It was proper rebuttal and could not have been reasonably anticipated in plaintiffs' main case.

Costs.

Appellants are also entitled to costs below on the well recognized principle that any litigant prevailing as to any portion of the property involved in a suit to quiet title is entitled as a matter of course to costs.

Ebner Gold M. Co. v. Alaska-Juneau Gold M. Co., 210 Fed. 599, 605 (9th C. C. A.).

"Costs are allowed, of course, to the plaintiff upon a judgment in his favor, in the following

cases: 1. In an action for the recovery of real property * * *,

Sec. 9787, *Revised Codes of Montana*, 1921.

Tom Reed Co. v. United Eastern Co. (Ariz.),
209 Pac. 283, 294;

Hoyt v. Hart, 149 Cal. 722, 731; 87 Pac. 569;
Riffel v. Letts (Cal. App.), 160 Pac. 845;

Hihn Co. v. Santa Cruz, 24 Cal. App. 365; 141
Pac. 391.

Dated, San Francisco,
October 10, 1927.

Respectfully submitted,

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